## SAFETY DATA SHEET

## [1.PRODUCT AND COMPANY IDENTIFICATION]

| [1.PRODUCT AND COMPANY IDENTIFICA          | 11 | ION]   |  |
|--|----|--|--|
| PRODUCT NAME                               | :  | LUNAC O-CA   |  |
| SUPPLIER                                   | :  | Kao Corporation  |  |
| ADDRESS                                    | :  | 1-3,Bunka 2-chome,Sumida-ku,Tokyo 131-8501 Japan   |  |
| DIVISION                                   | :  | Global Chemical Business   |  |
| TELEPHONE NUMBER                           | :  | 81-3-5630-7700   |  |
| FAX NUMBER                                 | :  | 81-3-5630-7889   |  |
| E-MAIL ADDRESS                             | :  | chemical@kao.co.jp   |  |
| EMERGENCY TELEPHONE NUMBER                 | :  | 81-3-5630-7700   |  |
| RECOMMENDED USE<br>AND RESTRICTIONS ON USE | :  |  |  |
| [2.HAZARDS IDENTIFICATION]                 |    |  |  |
| GHS CLASSIFICATION                         |    |  |  |
| PHYSICAL AND CHEMICAL HAZARDS              | :  | Not classified   |  |
| HEALTH HAZARDS                             |    |  |  |
| ACUTE TOXICITY (Oral)                      | :  | Not classified   |  |
| ACUTE TOXICITY (Dermal)                    | :  | Not classified   |  |
| ACUTE TOXICITY (Inhalation)                | :  | Not applicable(Vapours)  |  |
| SKIN CORROSION / IRRITATION                | :  | Not classified   |  |
| SERIOUS EYE DAMAGE / EYE<br>IRRITATION     | :  | Not classified   |  |
| RESPIRATORY SENSITIZATION                  | :  | Classification not possible  |  |
| SKIN SENSITIZATION                         | :  | Not classified   |  |
| GERM CELL MUTAGENICITY                     | :  | Not classified   |  |
| CARCINOGENICITY                            | :  | Not classified   |  |
| REPRODUCTIVE TOXICITY                      | :  | Not classified   |  |
| SPECIFIC TARGET ORGAN TOXICITY             | ſ  |  |  |
| - SINGLE EXPOSURE                          | :  | Classification not possible  |  |
| - REPEATED EXPOSURE                        | :  | Not classified   |  |
| ASPIRATION HAZARD                          | :  | Classification not possible  |  |
| ENVIRONMENTAL HAZARDS                      |    |  |  |
| HAZARDOUS TO THE AQUATIC ENVIRONMENT       |    |  |  |
| - ACUTE HAZARD                             |    | Not classified   |  |
|  |    | Not classified   |  |
| - HAZARDOUS TO THE OZONE<br>LAYER          | :  | Classification not possible  |  |
| GHS LABEL ELEMENTS                         |    |  |  |
| PICTOGRAMS OR SYMBOLS<br>SIGNAL WORD       |    | Not applicable<br>Not applicable   |  |
| HAZARD STATEMENTS                          |    | Not applicable   |  |
| PRECAUTIONARY STATEMENTS                   | •  |  |  |
| PREVENTION                                 | :  | Wash thoroughly after handling.<br>If needed, use personal protective equipment as required.                                     |  |
| RESPONSE                                   | :  | IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. |  |
|  |    | IF ON SKIN: Gently wash with plenty of water and soap.<br>Call a POISON CENTER or doctor if you feel unwell.                     |  |
| STORAGE                                    | •  | Store in well-ventilated place.  |  |
| DISPOSAL                                   | •  |  |  |
|  | •  |  |  |

| SAFE HANDLING ADVICE                         | Refer to SDS.   |  |  |  |
|--|---|--|--|--|
| [3.COMPOSITION / INFORMATION ON INGREDIENTS] |   |  |  |  |
| SUBSTANCE OR MIXTURE                         | Substance   |  |  |  |
| INGREDIENTS AND CONCENTRATION                | Oleic acid  |  |  |  |
| RANGE  |   |  |  |  |
| CAS RN                                       | 112-80-1  |  |  |  |
| [4.FIRST-AID MEASURES]                       |   |  |  |  |
| IN CASE OF INHALATION                        | Remove person to fresh air and keep comfortable for breathing.  |  |  |  |
| IN CASE OF SKIN CONTACT                      | Gently wash with plenty of soap and water.  |  |  |  |
| IN CASE OF EYE CONTACT                       | Rinse cautiously with water for several minutes. Remove contact lenses,   |  |  |  |
|  | if present and easy to do. Continue rinsing.  |  |  |  |
| IN CASE OF INGESTION                         | Call a POISON CENTER or doctor if you feel unwell.  |  |  |  |
| [5.FIRE-FIGHTING MEASURES]                   |   |  |  |  |
|  | Powder, alcohol-resistant foam, carbon dioxide, sand  |  |  |  |
| NOT SUITABLE EXTINGUISHING                   | No information available  |  |  |  |
| SPECIFIC HAZARDS                             | No information available  |  |  |  |
| SPECIFIC METHODS                             | Keep away from sources of ignition and use appropriate extinguishing media.Fight fire from upwind position if possible. |  |  |  |
| PROTECTION OF FIRE FIGHTERS                  | Use goggles in combination with dust mask, and other protections as appropriate to situation.                           |  |  |  |
| [6.ACCIDENTAL RELEASE MEASURES]              |   |  |  |  |
|  | Use goggles and protective gloves.  |  |  |  |
| PROTECTIVE EQUIPMENT AND                     | Large spills : Remove person to safety.   |  |  |  |
| EMERGENCY PROCEDURE                          | Ensure adequate ventilation.  |  |  |  |
|  | Do not discharge into the drains, surface waters or ground water directly.  |  |  |  |
| METHODS FOR CLEANING UP                      | Small spills: Absorb spills with sand, inert absorbent, waste cloth or sawdust. Then wipe up remainder in waste cloth.  |  |  |  |
|  | Large spills: Dike spills and dispose of in safe area.  |  |  |  |
| PREVENTION OF SECONDARY<br>HAZARDS           | Keep away from sources of ignition and prepare extinguishing media.   |  |  |  |
| [7.HANDLING AND STORAGE]                     |   |  |  |  |
| HANDLING                                     |   |  |  |  |
| TECHNICAL MEASURES                           | Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower.          |  |  |  |
| PRECAUTIONS                                  | Keep away from source of ignition.  |  |  |  |
| SAFE HANDLING ADVICE                         | Use an adequate ventilation.  |  |  |  |
|  | Wash thoroughly after handling.   |  |  |  |
|  | If needed, use personal protective equipment as required.   |  |  |  |
|  | Avoid contact with bases.   |  |  |  |
|  | Chara container tighthy closed in well ventilated place   |  |  |  |
| SUITABLE STORAGE CONDITIONS                  | Store container tightly closed in well-ventilated place.<br>Keep away from source of ignition.                          |  |  |  |
|  | Do not store with alkalies.   |  |  |  |
| SAFE PACKAGING MATERIALS                     | No information available  |  |  |  |
| [8.EXPOSURE CONTROLS / PERSONAL PROTECTION]  |   |  |  |  |
| -  | Facilities storing or utilizing this material should be equipped with an  |  |  |  |
|  | eyewash facility and a safety shower.   |  |  |  |

| LIMIT VALUES   | Use an adequate ventilation.  |
|--|---|
| ACGIH (TLV)  | : Not established   |
| OSHA (PEL)   | : Not established   |
| PERSONAL PROTECTIVE EQUIPMENT                                      |   |
| RESPIRATORY PROTECTION   |   |
| HAND PROTECTION  | : Use as appropriate to situation.  |
| EYE PROTECTION   | : Rubber gloves   |
| SKIN AND BODY PROTECTION   | : Safety glasses<br>: Full-body suit  |
| HYGIENE MEASURES   | : No information available  |
|  |   |
| [9.PHYSICAL AND CHEMICAL PROPERT                                   | IES]  |
| APPEARANCE   |   |
| PHYSICAL STATE   | : Liquid  |
| COLOUR   | : Dark brown  |
| ODOUR  | : Characteristic odour  |
| рН   | : No data available   |
| SPECIFIC TEMPERATURES / TEMPER/<br>AT WHICH CHANGES IN PHYSICAL ST |   |
| BOILING POINT  | : No information available  |
| MELTING POINT  | : No information available  |
| FLASH POINT  | : 197 °C ( 386.6 °F) (CLEVELAND open cup method)                                |
| FLAMMABILITY OR EXPLOSIVE PROPE                                    | RTIES   |
| FLAMMABILITY OR EXPLOSIVE<br>LIMITS                                | : UPPER LIMIT : No information available LOWER LIMIT : No information available |
| VAPOUR PRESSURE  | : No information available  |
| VAPOUR DENSITY   | : No information available  |
| DENSITY (SPECIFIC GRAVITY)   | : No information available  |
| SOLUBILITY   |   |
| WATER SOLUBILITY   | : Insoluble   |
| SOLVENT SOLUBILITY   | : Soluble in chloroform and ethanol.  |
|  | Soluble in ether.   |
| PARTITION COEFFICIENT: n-<br>OCTANOL / WATER (log Pow)             | : No information available  |
| AUTO-IGNITION TEMPERATURE  | : No information available  |
| DECOMPOSITION TEMPERATURE  | : No information available  |
| ODOUR THRESHOLD  | : No information available  |
| EVAPORATION RATE   | : No information available  |
| FLAMMABILITY (SOLID,GAS)   | : No information available  |
| VISCOSITY  | : No information available  |
| OTHER DATA   | : No information available  |
| [10.STABILITY AND REACTIVITY]                                      |   |
| CHEMICAL STABILITY   | : Stable in general.  |
| POSSIBILITY OF HAZARDOUS<br>REACTIONS                              | : Reacts with base.   |
|  | No self-reactivity.   |
| CONDITIONS TO AVOID  | : Avoid contact with strong bases.  |
| INCOMPATIBLE MATERIALS   | : Do not use cupric material.   |
| HAZARDOUS DECOMPOSITION<br>PRODUCTS                                | : No special hazardous and harmful combustion or decomposition products.        |
|  |   |

| OTHERS                                      | :  | No information available   |  |
|---|----|--|--|
| [11.TOXICOLOGICAL INFORMATION]              |    |  |  |
| ACUTE TOXICITY                              |    |  |  |
| Oral  |    |  |  |
| INFORMATION ON PRODUCT                      | :  | Rat, LD50 : 25000 mg/kg (Data on Oleic acid) (2)<br>Mouse, LD50 : 28000 mg/kg (Data on Oleic acid) (2) |  |
| Dermal                                      |    |  |  |
| INFORMATION ON PRODUCT                      | :  | No information available   |  |
| Inhalation                                  |    |  |  |
| INFORMATION ON PRODUCT                      | :  | No information available   |  |
| SKIN CORROSION / IRRITATION                 |    |  |  |
| INFORMATION ON PRODUCT                      | :  | Rabbit, undiluted, 4hr, semi-occluded application (OECD 404) :<br>Not classified                       |  |
| SERIOUS EYE DAMAGE / IRRITATION             |    |  |  |
| INFORMATION ON PRODUCT                      | :  | No information available   |  |
| RESPIRATORY OR SKIN SENSITIZATIO            | ΟN |  |  |
| RESPIRATORY                                 |    |  |  |
| INFORMATION ON PRODUCT                      | :  | No information available   |  |
| SKIN  |    |  |  |
| INFORMATION ON PRODUCT                      | :  | No information available   |  |
| MUTAGENICITY (GERM CELL MUTAGENICITY)       |    |  |  |
| INFORMATION ON PRODUCT                      | :  | Ames test (TA98, TA100) : Negative   |  |
| CARCINOGENICITY                             |    |  |  |
| INFORMATION ON PRODUCT                      | :  | No information available   |  |
| IARC  | :  | Not listed   |  |
| NTP   | :  | Not listed   |  |
| EU  | :  | Not listed   |  |
| OSHA  | :  | Not listed   |  |
| REPRODUCTIVE TOXICITY                       |    |  |  |
| INFORMATION ON PRODUCT                      | :  | No information available   |  |
| SPECIFIC TARGET ORGAN TOXICITY              |    |  |  |
| - SINGLE EXPOSURE                           |    |  |  |
|   | :  | No information available   |  |
| - REPEATED EXPOSURE                         |    |  |  |
|   | ÷  | No information available   |  |
| ASPIRATION HAZARD<br>INFORMATION ON PRODUCT |    | No information available   |  |
| OTHER INFORMATION                           |    | No information available   |  |
| OTTER INFORMATION                           | •  |  |  |
| [12.ECOLOGICAL INFORMATION]                 |    |  |  |
| ECOTOXICITY                                 | :  | Red killifish, 96h, LC50 : > 2.5 mg/L (12)   |  |
|   |    | Daphnia magna, 48h, EC50 : > 2.8 mg/L (12)<br>Selenastrum, 72h, EC50 : > 2.6 mg/L (12)                 |  |
|   |    | Daphnia magna, 21days :  |  |
|   |    | NOEC = $0.32 \text{ mg/L}$ (over the maximum soluble concentration)                                    |  |
|   |    | Alga, Growth Inhibition Test, OECD 201, 72h :  |  |
|   |    | NOErC = $3.6 \text{ mg/L}$ (over the maximum soluble concentration)                                    |  |
| PERSISTENCE / DEGRADABILITY                 | :  | Modified MITI test I (OECD 301C), 28days : Readily biodegradable (4)                                   |  |
| MOBILITY IN SOIL                            | :  | No information available   |  |
|   |    |  |  |

|  | <ul><li>No information available</li><li>No information available</li></ul> |                                       |  |  |  |
|--|---|---------------------------------------|--|--|--|
| [13.DISPOSAL CONSIDERATIONS]                     |   |                                       |  |  |  |
|  | Review "HANDLING AND S  | · · · · · · · · · · · · · · · · · · · |  |  |  |
|  | Passed to a licensed waste  | contractor.                           |  |  |  |
| Dispose of waste in accordance with local,       | state and federal regulations.  |                                       |  |  |  |
| [14.TRANSPORT INFORMATION]                       |   |                                       |  |  |  |
| Follow all regulations in your country or region |   |                                       |  |  |  |
| INTERNATIONAL REGULATIONS                        |   |                                       |  |  |  |
| UN CLASS / UN NUMBER                             | : Not applicable (IMDG, IATA)   | 1                                     |  |  |  |
| SPECIAL PRECAUTIONS FOR USER                     | : Review "ACCIDENTAL REL  | EASE MEASURES (Section 6)".           |  |  |  |
|  | Review "HANDLING AND S  | TORAGE (Section 7)".                  |  |  |  |
|  | Ensure containers without br  |                                       |  |  |  |
|  | Ensure containers tightly fixe<br>Follow all regulations in your            |                                       |  |  |  |
|  | Keep away from source of ig   | , ,                                   |  |  |  |
|  |   |                                       |  |  |  |
| [15.REGULATORY INFORMATION]                      |   |                                       |  |  |  |
| Follow all regulations in your country or reg    | gion.   |                                       |  |  |  |
| INVENTORIES                                      | : ENCS(Japan)   | 2-975                                 |  |  |  |
|  | TSCA(USA)   | Yes                                   |  |  |  |
|  | EINECS(EU)  | 204-007-1                             |  |  |  |
|  | AICS(Australia)   | Yes                                   |  |  |  |
|  | DSL(Canada)   | Yes                                   |  |  |  |
|  | ECL(Korea)  | KE-26450                              |  |  |  |

KAO Corporation is not able to check up the regulatory information in regard to the substances in your country or region, therefore, we request this matter would be filled by your responsibility.

PICCS(Philippines)

IECSC(China)

Yes

Yes

| [16.OTHER INFORMATION] |   |
|------------------------|---|
| REFERENCE              | <ul> <li>Safety data sheet for chemical products - Part 1: Content and order of sections(ISO 11014-1)</li> </ul>        |
|                        | -International Chemical Safety Cards(ICSC) (Compiler's Guide)(1994)   |
|                        | (2)Registry of Toxic Effects of Chemical Substances   |
|                        | (4)Biodegradation and Bioconcentration of the Existing Chemical<br>Substances under the Chemical Substances Control Law |
|                        | (12)Results of Eco-toxicity tests of chemicals conducted by Ministry of the Environment in Japan                        |

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