

## SAFETY DATA SHEET

(GHS, Appendix 4)

### SECTION 1 : IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

#### 1.1. Product identifier

Product name : Koavone

EC N° : 279-825-5

CAS N° : 81786-75-6

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

Industrial-grade aromatic raw material, not intended for retail sale

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

Registered company name : Aromatics Original Material Co., Ltd.

Address : 3/8 1st floor Bangwaek Rd, Bangpai, Bangkae, Bangkok 10160 Thailand.

### SECTION 2 : HAZARDS IDENTIFICATION

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

##### GHS compliant.

Flammable liquid, Category 4 (Flam. Liq. 4, H227).

Skin sensitisation, Category 1B (Skin Sens. 1B, H317).

Hazardous to the aquatic environment - Acute hazard, Category 2 (Aquatic Acute 2, H401).

Hazardous to the aquatic environment - Chronic hazard, Category 2 (Aquatic Chronic 2, H411).

#### 2.2. Label elements

##### GHS compliant.

Hazard pictograms :



GHS07



GHS09

Signal Word :

WARNING

Product identifiers (list of classified components) :

CAS 81786-75-6      3,5,6,6-TETRAMETHYL-4-METHYLENEHEPTAN-2-ONE

Hazard statements :

H227      Combustible liquid.

H317      May cause an allergic skin reaction.

H411      Toxic to aquatic life with long lasting effects.

Precautionary statements - Prevention :

P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.  
 P261 Avoid breathing dust/fume/gas/mist/vapours/spray.  
 P280 Wear protective gloves/protective clothing/eye protection/face protection/hearing protection/ ...

Precautionary statements - Response :

P302 + P352 IF ON SKIN: Wash with plenty of water/...  
 P362 + P364 Take off contaminated clothing and wash it before reuse.

Precautionary statements - Storage :

P403 + P235 Store in a well-ventilated place. Keep cool.

### 2.3. Other hazards

No data available.

## SECTION 3 : COMPOSITION/INFORMATION ON INGREDIENTS

### 3.1. Substances

#### Composition :

Identification	GHS	Note	%
CAS: 81786-75-6 EC: 279-825-5 REACH: 01-2119980043-42-0000 3,5,6,6-TETRAMETHYL-4-METHYLENEHEPTAN-2-ONE	GHS07, GHS09 Wng Flam. Liq. 4, H227 Skin Sens. 1B, H317 Aquatic Acute 2, H401 Aquatic Chronic 2, H411		100%

## SECTION 4 : FIRST AID MEASURES

As a general rule, in case of doubt or if symptoms persist, always call a doctor.  
 NEVER induce swallowing by an unconscious person.

### 4.1. Description of first aid measures

#### In the event of splashes or contact with eyes :

Wash thoroughly with fresh, clean water for 15 minutes holding the eyelids open.

#### In the event of splashes or contact with skin :

Remove contaminated clothing and wash the skin thoroughly with soap and water or a recognised cleaner.

Watch out for any remaining product between skin and clothing, watches, shoes, etc.

In the event of an allergic reaction, seek medical attention.

If the contaminated area is widespread and/or there is damage to the skin, a doctor must be consulted or the patient transferred to hospital.

#### In the event of swallowing :

Do not give the patient anything orally.

In the event of swallowing, if the quantity is small (no more than one mouthful), rinse the mouth with water and consult a doctor.

Keep the person exposed at rest. Do not force vomiting.

Seek medical attention immediately, showing the label.

If swallowed accidentally, call a doctor to ascertain whether observation and hospital care will be necessary. Show the label.

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

No data available.

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

No data available.

## SECTION 5 : FIREFIGHTING MEASURES

Flammable.

Combustible liquid.

Chemical powders, carbon dioxide and other extinguishing gas are suitable for small fires.

#### 5.1. Extinguishing media

Keep packages near the fire cool, to prevent pressurised containers from bursting.

#### Suitable methods of extinction

In the event of a fire, use :

- sprayed water or water mist
- water with AFFF (Aqueous Film Forming Foam) additive
- halon
- foam
- multipurpose ABC powder
- BC powder
- carbon dioxide (CO<sub>2</sub>)

Prevent the effluent of fire-fighting measures from entering drains or waterways.

#### Unsuitable methods of extinction

In the event of a fire, do not use :

- water jet

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

A fire will often produce a thick black smoke. Exposure to decomposition products may be hazardous to health.

Do not breathe in smoke.

In the event of a fire, the following may be formed :

- carbon monoxide (CO)
- carbon dioxide (CO<sub>2</sub>)

#### 5.3. Advice for firefighters

Fire-fighting personnel are to be equipped with autonomous insulating breathing apparatus.

### SECTION 6 : ACCIDENTAL RELEASE MEASURES

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

Consult the safety measures listed under headings 7 and 8.

#### For non first aid worker

Avoid any contact with the skin and eyes.

#### For first aid worker

First aid workers will be equipped with suitable personal protective equipment (See section 8).

#### 6.2. Environmental precautions

Contain and control the leaks or spills with non-combustible absorbent materials such as sand, earth, vermiculite, diatomaceous earth in drums for waste disposal.

Prevent any material from entering drains or waterways.

If the product contaminates waterways, rivers or drains, alert the relevant authorities in accordance with statutory procedures

Use drums to dispose of collected waste in compliance with current regulations (see section 13).

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

Clean preferably with a detergent, do not use solvents.

#### 6.4. Reference to other sections

No data available.

### SECTION 7 : HANDLING AND STORAGE

Requirements relating to storage premises apply to all facilities where the substance is handled.

Individuals with a history of skin sensitisation should not, under any circumstance, handle this substance.

**7.1. Precautions for safe handling**

- Always wash hands after handling.
- Remove and wash contaminated clothing before re-using.
- Ensure that there is adequate ventilation, especially in confined areas.
- Remove contaminated clothing and protective equipment before entering eating areas.

**Fire prevention :**

- Handle in well-ventilated areas.
- Vapours are heavier than air. They can spread along the ground and form mixtures that are explosive with air.
- Prevent the formation of flammable or explosive concentrations in air and avoid vapor concentrations higher than the occupational exposure limits.
- Prevent the accumulation of electrostatic charges with connections to earth.
- Use the mixture in premises free of naked flames or other sources of ignition and ensure that electrical equipment is suitably protected.
- Keep packages tightly closed and away from sources of heat, sparks and naked flames.
- Do not use tools which may produce sparks. Do not smoke.
- Prevent access by unauthorised personnel.

**Recommended equipment and procedures :**

- For personal protection, see section 8.
- Observe precautions stated on label and also industrial safety regulations.
- Packages which have been opened must be reclosed carefully and stored in an upright position.

**Prohibited equipment and procedures :**

- No smoking, eating or drinking in areas where the substance is used.
- Never open the packages under pressure.

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

- No data available.

**Storage**

- Keep the container tightly closed in a dry, well-ventilated place.
- Keep away from all sources of ignition - do not smoke.
- Keep well away from all sources of ignition, heat and direct sunlight.
- Avoid accumulation of electrostatic charges.
- The floor must be impermeable and form a collecting basin so that, in the event of an accidental spillage, the liquid cannot spread beyond this area.

**Packaging**

- Always keep in packaging made of an identical material to the original.

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

- No data available.

**SECTION 8 : EXPOSURE CONTROLS/PERSONAL PROTECTION****8.1. Control parameters**

- No data available.

**8.2. Exposure controls****Personal protection measures, such as personal protective equipment**

- Pictogram(s) indicating the obligation of wearing personal protective equipment (PPE) :



Use personal protective equipment that is clean and has been properly maintained.

Store personal protective equipment in a clean place, away from the work area.

Never eat, drink or smoke during use. Remove and wash contaminated clothing before re-using. Ensure that there is adequate ventilation, especially in confined areas.

#### - Eye / face protection

Avoid contact with eyes.

Use eye protectors designed to protect against liquid splashes

Before handling, wear safety goggles in accordance with standard EN166.

#### - Hand protection

Use suitable protective gloves that are resistant to chemical agents in accordance with standard EN ISO 374-1.

Gloves must be selected according to the application and duration of use at the workstation.

Protective gloves need to be selected according to their suitability for the workstation in question : other chemical products that may be handled, necessary physical protections (cutting, pricking, heat protection), level of dexterity required.

Type of gloves recommended :

- PVA (Polyvinyl alcohol)

- Butyl Rubber (Isobutylene-isoprene copolymer)

Recommended properties :

- Impervious gloves in accordance with standard EN ISO 374-2

#### - Body protection

Avoid skin contact.

Wear suitable protective clothing.

Suitable type of protective clothing :

In the event of substantial spatter, wear liquid-tight protective clothing against chemical risks (type 3) in accordance with EN14605/A1 to prevent skin contact.

In the event of a risk of splashing, wear protective clothing against chemical risks (type 6) in accordance with EN13034/A1 to prevent skin contact.

Work clothing worn by personnel shall be laundered regularly.

After contact with the product, all parts of the body that have been soiled must be washed.

## SECTION 9 : PHYSICAL AND CHEMICAL PROPERTIES

### 9.1. Information on basic physical and chemical properties

#### General information :

Physical state : Fluid liquid.

#### Important health, safety and environmental information

pH : Not relevant.

Boiling point/boiling range : Not specified.

Flash Point : 86.00 °C.

Method for determining the flash point:

ASTM D 93-15 (Standard Test Methods for Flash Point by Pensky-Martens Closed Cup Tester).

Vapour pressure (50°C) : Not stated.

Density :	0,847-0,887@20°C
	Method for determining the density : NF ISO 279:1999 (T75-111)
Water solubility :	Insoluble.
Melting point/melting range :	Not specified.
Self-ignition temperature :	Not specified.
Decomposition point/decomposition range :	Not specified.
Index of refraction :	1,450-1,470@20°C
	Method of determining the refractive index : NF ISO 280:1999 (T75-112)

## 9.2. Other information

No data available.

## SECTION 10 : STABILITY AND REACTIVITY

### 10.1. Reactivity

No data available.

### 10.2. Chemical stability

This substance is stable under the recommended handling and storage conditions in section 7.

### 10.3. Possibility of hazardous reactions

When exposed to high temperatures, the substance can release hazardous decomposition products, such as carbon monoxide and dioxide, fumes and nitrogen oxide.

### 10.4. Conditions to avoid

Any apparatus likely to produce a flame or to have a metallic surface at high temperature (burners, electric arcs, furnaces etc.) must not be allowed on the premises.

Avoid :

- accumulation of electrostatic charges.
- flames and hot surfaces

### 10.5. Incompatible materials

No data available.

### 10.6. Hazardous decomposition products

The thermal decomposition may release/form :

- carbon monoxide (CO)
- carbon dioxide (CO<sub>2</sub>)

## SECTION 11 : TOXICOLOGICAL INFORMATION

### 11.1. Information on toxicological effects

Exposure to vapours from this solvent in excess of the stated occupational exposure limit may result in adverse health effects such as mucous membrane and respiratory system irritation and adverse effects on kidney, liver and central nervous system.

Repeated or prolonged contact with the substance may cause removal of natural oil from the skin resulting in non-allergic contact dermatitis and absorption through the skin.

Splashes in the eyes may cause irritation and reversible damage

May cause an allergic reaction by skin contact.

#### 11.1.1. Substances

No toxicological data available for the substances.

#### 11.1.2 Complex substance

No toxicological data available for the substances.

## SECTION 12 : ECOLOGICAL INFORMATION

Toxic to aquatic life with long lasting effects.

The product must not be allowed to run into drains or waterways.

### 12.1. Toxicity

#### 12.1.2 Complex substance

No aquatic toxicity data available for the substances.

### 12.2. Persistence and degradability

No data available.

### 12.3. Bioaccumulative potential

No data available.

### 12.4. Mobility in soil

No data available.

### 12.5. Results of PBT and vPvB assessment

No data available.

### 12.6. Other adverse effects

No data available.

## SECTION 13 : DISPOSAL CONSIDERATIONS

The appropriate waste management of the substance and/or its container must be determined in accordance with local regulations.

### 13.1. Waste treatment methods

Do not pour into drains or waterways.

#### Waste :

Waste management is carried out without endangering human health, without harming the environment and, in particular without risk to water, air, soil, plants or animals.

Recycle or dispose of waste in compliance with current legislation, preferably via a certified collector or company.

Do not contaminate the ground or water with waste, do not dispose of waste into the environment.

#### Soiled packaging :

Empty container completely. Keep label(s) on container.

Give to a certified disposal contractor.

## SECTION 14 : TRANSPORT INFORMATION

Transport product in compliance with provisions of the ADR for road, RID for rail, IMDG for sea and ICAO/IATA for air transport (ADR 2019 - IMDG 2018 - ICAO/IATA 2020).

### 14.1. UN number

3082

### 14.2. UN proper shipping name

UN3082=ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.

(3,5,6,6-tetramethyl-4-methyleneheptan-2-one)

### 14.3. Transport hazard class(es)







regulation if Q <= 5 1 / 5 kg (IATA 4.4.4 - DS A197)									
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For limited quantities, see part 2.7 of the OACI/IATA and chapter 3.4 of the ADR and IMDG.

For excepted quantities, see part 2.6 of the OACI/IATA and chapter 3.5 of the ADR and IMDG.

Marine pollutant (IMDG 3.1.2.9):(3,5,6,6-tetramethyl-4-methyleneheptan-2-one)

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

No data available.

### SECTION 15 : REGULATORY INFORMATION

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

The following regulations have been used:

- Globally Harmonized System of Classification and Labelling of Chemicals (GHS), review no. 7 (2017)

#### - Container information:

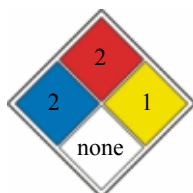
No data available.

#### - Particular provisions :

No data available.

#### - Standardised American system for the identification of hazards presented by the product in view of emergency procedures (NFPA 704) :

NFPA 704, Labelling: Health=2 Inflammability=2 Instability/Reactivity=1 Specific Risk=none



#### 15.2. Chemical safety assessment

No data available.

### SECTION 16 : OTHER INFORMATION

Since the user's working conditions are not known by us, the information supplied on this safety data sheet is based on our current level of knowledge and on national and community regulations.

It is at all times the responsibility of the user to take all necessary measures to comply with legal requirements and local regulations.

The information in this safety data sheet must be regarded as a description of the safety requirements relating to the substance and not as a guarantee of the properties thereof.

#### Wording of the phrases mentioned in section 3 :

H227	Combustible liquid.
H317	May cause an allergic skin reaction.
H401	Toxic to aquatic life.
H411	Toxic to aquatic life with long lasting effects.

#### Abbreviations :

ADR : European agreement concerning the international carriage of dangerous goods by Road.

IMDG : International Maritime Dangerous Goods.

IATA : International Air Transport Association.

ICAO : International Civil Aviation Organisation

RID : Regulations concerning the International carriage of Dangerous goods by rail.

GHS07 : Exclamation mark

GHS09 : Environment

PBT: Persistent, bioaccumulable and toxic.

vPvB : Very persistent, very bioaccumulable.