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

1.1 Product identifier

Trade name: OPTODYNE UV-1100
Article number: UV1100

1.2 Relevant identified uses of the substance or mixture and uses advised against:
No further relevant information available.

1.3 Details of the supplier of the safety data sheet
Manufacturer/Supplier:
DAIKIN INDUSTRIES, LTD. CHEMICALS DIVISION:
Umeda Center Bldg., 4-12, Nakazaki-Nishi 2-chome, Kita-Ku, Osaka, JAPAN
Phone: (+81) 6-6373-4345 Fax: (+81) 6-6373-4281

Further information obtainable from: http://www.daikin.com/

1.4 Emergency telephone number:
Japan: +81-6-6349-7521
China: +86-512-5-232-0949, +86-21-34151689
South Korea: +82-2-568-1722
Americas: +1-256-306-5000
Europe: +49-211-179 225-0

SECTION 2: Hazard identification

2.1 Classification of the substance or mixture
Classification according to Regulation (EC) No 1272/2008

Carc. 2 H351 Suspected of causing cancer.

Acute Tox. 4 H302 Harmful if swallowed.
Acute Tox. 4 H312 Harmful in contact with skin.
Acute Tox. 4 H332 Harmful if inhaled.
Skin Sens. 1 H317 May cause an allergic skin reaction.
Aquatic Chronic 3 H412 Harmful to aquatic life with long lasting effects.

2.2 Label elements

Labelling according to Regulation (EC) No 1272/2008:
The product is classified and labelled according to the CLP regulation.

Signal word: Warning

Precautionary statements:
P261 Avoid breathing dust/fume/gas/mist/vapours/spray.
P280 Wear protective gloves/protective clothing/eye protection/face protection.
P301+P312 IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell.
P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P405 Store locked up.
P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

SECTION 3: Composition/information on ingredients

Information on ingredients:

Blended fluoroepoxy monomers 65-75%
Trade name: OPTODYNE UV-1100

Non-fluoro epoxy monomer <5%
Binder <5%
Aquatic Chronic 2, H411
Skin Irrit. 2, H315; Eye Irrit. 2, H319; Skin Sens. 1, H317
Vinylcyclohexane diepoxide 20 – 30%
Acute Tox. 3, H301; Acute Tox. 3, H311; Acute Tox. 3, H331
Carc. 2, H351
CAS: 108-32-7 Propylene carbonate < 5%
Eye Irrit. 2, H319
Sb polymerization initiator < 5%

Additional information: For the wording of the listed hazard phrases refer to section 16.

SECTION 4: First aid measures

4.1 Description of first aid measures
General information: Do not expose to sunlight or other strong light.
After inhalation: Supply fresh air and be sure call for a doctor.
In case of unconsciousness place patient stably in side position for transportation.
Supply fresh air; consult doctor in case of complaints.
After skin contact: Immediately wash with water and soap and rinse thoroughly.
Consult a doctor in case of complaints.
Immediately remove any clothing soiled by the product and store in a dark container or wrapping.
After eye contact: Immediately rinse with a lot of water for several minutes. Remove contact lenses if possible. Continue rinsing.
Consult an ophthalmologist in case of complaints.
Rinse opened eye for 15 minutes under running water, periodically lifting upper and lower eyelids. Then consult a doctor.
After swallowing: Call for doctor immediately.
Rinse mouth with water. Do not induce vomiting.
Consult a doctor in case of complaints.

4.2 Most important symptoms and effects, both acute and chronic: Allergic reactions

4.3 Indication of any immediate medical attention and special treatment needed:
No further relevant information available.

SECTION 5: Firefighting measures

5.1 Extinguishing media
Suitable extinguishing agents: Use fire extinguishing methods suitable for surrounding conditions.
5.2 Special hazards arising from the substance or mixture:
Formation of toxic gases is possible during heating or in case of fire.
5.3 Advice for firefighters:
Protective equipment:
Wear self-contained breathing apparatus and protective suit.
Do not inhale explosion gases or combustion gases.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures:
Ensure adequate ventilation before entering the area.
Stay on the windward side.
Keep out unauthorized persons.
Wear appropriate protective devices (See Section 8 Exposure Controls/Personal Protection).
Avoid contact with eyes and skin.
Do not swallow the product.
6.2 Environmental precautions: Prevent seepage into sewage system, workpits and cellars.

6.3 Methods and material for containment and cleaning up:
For a small amount of leakage: Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders) or collect in an empty container that can be sealed tightly.
For a large amount of leakage: Enclose with banks to avoid outflow. Lead the leakage to a safe place and collect.

6.4 Reference to other sections:
See Section 8 for information on personal protection equipment.
See Section 13 for disposal information.

SECTION 7: Handling and storage

7.1 Precautions for safe handling:
Ensure good ventilation/exhaustion at the workplace.
Do not handle until all safety precautions have been read and understood.
Never allow exposure to sunlight or strong light until after curing.

7.2 Conditions for safe storage, including any incompatibilities:
Storage
Requirements to be met by storerooms and receptacles:
Store in a cool and dry location.
Prevent any seepage into the ground.
Keep containers tightly sealed.

Information about storage in one common storage facility:
Store away from oxidising agents.
See section 10 for information on incompatible materials.

Further information about storage conditions:
Protect from heat and direct sunlight.
Store containers in a well ventilated area.
Store locked up.

7.3 Specific end use(s): No further relevant information available.

SECTION 8: Exposure controls/personal protection

Additional information about design of technical facilities: No further data; see item 7.

8.1 Control parameters
No further information available.

Ingredients with limit values that require monitoring at the workplace:
The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.

8.2 Exposure controls
Personal protective equipment
General protective and hygienic measures:
Wash hands before breaks and at the end of work.
Do not eat or drink while working.
Keep away from tobacco products.
Never allow exposure to sunlight or other stront light until after curing.
Immediately remove all soiled and contaminated clothing and store in a dark container or dark wrapping until disposal to hazardous waste.

Respiratory protection:
Use respiratory protective device with filters for organic and acid gas (or airline respirators in some cases) if formation of toxic gases is possible while the product is heated.
Use respiratory protective device with organic gas cartridge.

Protection of hands:

Protective gloves

Material of gloves: Rubber
Penetration time of glove material
The exact breakthrough time has to be found out by the manufacturer of the protective gloves and has to be observed.

Eye protection:

- Safety glasses
- Splash-proof goggles

Body protection:
- Protective work clothing
- Impervious protective work clothing, face protection, and gloves

## SECTION 9: Physical and chemical properties

### 9.1 Information on basic physical and chemical properties

#### General Information

- **Appearance**
  - Form: Fluid
  - Colour: Light yellow
  - Odour: Characteristic
  - Odour threshold: Not determined.

- **pH-value:** No further information available.
- **Melting point/freezing point:** No further information available.
- **Initial boiling point and boiling range:** No further information available.
- **Flash point:** 118 °C (COC)
- **Flammability (solid, gas):** Not applicable.
- **Decomposition temperature:** No further information available.
- **Auto-ignition temperature:** Product is not self-igniting.
- **Explosive properties:** Product does not present an explosion hazard.

#### 9.2 Other information:

No further relevant information available.

## SECTION 10: Stability and reactivity

### 10.1 Reactivity
No further relevant information available.

### 10.2 Chemical stability

**Thermal decomposition / conditions to be avoided:** To avoid thermal decomposition do not overheat.

### 10.3 Possibility of hazardous reactions:

- May react drastically when exposed to light or heat.
- No dangerous reactions known under normal conditions of use.
**SECTION 11: Toxicological information**

11.1 Information on toxicological effects

Acute toxicity
Harmful if swallowed, in contact with skin or if inhaled.

**LD/LC50 values relevant for classification:** No further information available.

Primary irritant effect
Skin corrosion/irritation No further information available.
Serious eye damage/irritation Based on available data, the classification criteria are not met.
Respiratory or skin sensitisation
May cause an allergic skin reaction.

Other information (about experimental toxicology): No further information available.

Subacute to chronic toxicity No further information available.

CMR effects
Carcinogenicity
Suspected of causing cancer.

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

STOT-single exposure Based on available data, the classification criteria are not met.

STOT-repeated exposure Based on available data, the classification criteria are not met.

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

**SECTION 12: Ecological information**

12.1 Toxicity

Aquatic toxicity: No further relevant information available.

12.2 Persistence and degradability: No further relevant information available.

12.3 Bioaccumulative potential: No further relevant information available.

12.4 Mobility in soil: No further relevant information available.

Ecotoxicological effects: no data

Remark: Harmful to fish

Additional ecological information:

General notes: Harmful to aquatic organisms

12.5 Results of PBT and vPvB assessment

PBT:
No further relevant information available.
Not applicable.

vPvB:
No further relevant information available.
Not applicable.

12.6 Other adverse effects: No further relevant information available.

**SECTION 13: Disposal considerations**

13.1 Waste treatment methods

Recommendation:
Dispose of used containers (tubes) and any uncured or un-neutralized contamination to permitted hazardous waste. Disposal must be made according to official regulations.

Uncleaned packaging

Recommendation: Disposal must be made according to official regulations.
SECTION 14: Transport information

14.1 UN-Number:
ADR, ADN, IMDG, IATA
Not applicable

14.2 UN proper shipping name:
ADR, ADN, IMDG, IATA
Not applicable

14.3 Transport hazard class(es):
ADR, ADN, IMDG, IATA
Class:
Not applicable

14.4 Packing group:
ADR, IMDG, IATA
Not applicable

14.5 Environmental hazards:
Marine pollutant:
No

14.6 Special precautions for user:
Not applicable.

14.7 Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code:
Not applicable.

Transport/Additional information:
Avoid direct sunlight. Make sure of no damage, corrosion, leaks on the receptacles.
Take necessary measures for preventing cargo shift.

UN "Model Regulation":
Not applicable* 

SECTION 15: Regulatory information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture
No further relevant information available.

Labelling according to Regulation (EC) No 1272/2008
The product is classified and labelled according to the CLP regulation.

Hazard pictograms
GHS07  GHS08

Signal word Warning

Hazard-determining components of labelling:
Vinylcyclohexane diepoxide
Binder

Hazard statements
H302+H312+H332 Harmful if swallowed, in contact with skin or if inhaled.
H317 May cause an allergic skin reaction.
H351 Suspected of causing cancer.
H412 Harmful to aquatic life with long lasting effects.

Precautionary statements
P261 Avoid breathing dust/fume/gas/mist/vapours/spray.
P280 Wear protective gloves/protective clothing/eye protection/face protection.
P301+P312 IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell.
P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P405 Store locked up.
P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

National regulations No further information available.

15.2 Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

SECTION 16: Other information

The product is for the industrial use only. We do not guarantee the safety in case the product is used for the other purposes. When using the product for health-care application or food/feed application, consult us in advance.
This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.
Trade name: OPTODYNE UV-1100

Department issuing SDS: EHS Department
Contact: http://www.daikin.com/

Abbreviations and acronyms:
ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
IMDG: International Maritime Code for Dangerous Goods
IATA: International Air Transport Association
GHS: Globally Harmonised System of Classification and Labelling of Chemicals
LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent
PBT: Persistent, Bioaccumulative and Toxic
vPvB: very Persistent and very Bioaccumulative
Acute Tox. 3: Acute toxicity – Category 3
Acute Tox. 4: Acute toxicity – Category 4
Skin Irrit. 2: Skin corrosion/irritation – Category 2
Eye Irrit. 2: Serious eye damage/eye irritation – Category 2
Skin Sens. 1: Skin sensitisation – Category 1
Carc. 2: Carcinogenicity – Category 2
Aquatic Chronic 2: Hazardous to the aquatic environment - long-term aquatic hazard – Category 2
Aquatic Chronic 3: Hazardous to the aquatic environment - long-term aquatic hazard – Category 3

* Data compared to the previous version altered.