

Printing date 16.12.2015

Version number 1

Revision: 16.12.2015

SECTION 1: Identification of the substance/mixture and of the company/undertaking**1.1 Product identifier****Trade name:** OPTODYNE UV-3200**Article number:** UV3200**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.



Aquatic Chronic 2 H411 Toxic to aquatic life with long lasting effects.



Acute Tox. 4	H302 Harmful if swallowed.
Acute Tox. 4	H312 Harmful in contact with skin.
Acute Tox. 4	H332 Harmful if inhaled.
Skin Irrit. 2	H315 Causes skin irritation.
Eye Irrit. 2	H319 Causes serious eye irritation.
Skin Sens. 1	H317 May cause an allergic skin reaction.

Hazard description:

T Toxic

N Dangerous for the environment

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.

P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P321 Specific treatment (see on this label).

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P405 Store locked up.

P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

Additional information:

EUH205 Contains epoxy constituents. May produce an allergic reaction.

SECTION 3: Composition/information on ingredients**Information on ingredients:**

Blended fluoroepoxy monomers 40-50%

Poly(Bisphenol-A-co-epichlorohydrin) 30-40%
Xi R36/38; Xi R43; N R51/53

Aquatic Chronic 2, H411

Skin Irrit. 2, H315; Eye Irrit. 2, H319; Skin Sens. 1, H317

Vinylcyclohexane diepoxide 20-30%
T R23/24/25; Xn R40

Carc. Cat. 3

Acute Tox. 3, H301; Acute Tox. 3, H311; Acute Tox. 3, H331

Carc. 2, H351

Sb polymerization initiator <5%

Others <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:** Seek medical treatment.**After inhalation:** Supply fresh air or oxygen; call for doctor.**After skin contact:**

Remove contaminated clothes immediately.

Consult a doctor in case of complaints.

After eye contact:

Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.

Consult an ophthalmologist in case of complaints.

After swallowing: Do not induce vomiting; Consult a doctor immediately.**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 fully protective suit.

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.

Keep out unauthorized persons.

6.2 Environmental precautions: Do not allow to enter sewers/surface or ground water.

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6.3 Methods and material for containment and cleaning up:

Dispose of the material collected according to regulations.

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:**

Open and handle receptacle with care.

Prevent formation of aerosols.

Ensure good ventilation/exhaustion at the workplace.

Do not handle until all safety precautions have been read and understood.

Information about fire - and explosion protection: Keep ignition sources away - Do not smoke.**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.

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:

Store in dry conditions.

Store in a cool place (5 - 10 °C) to avoid reaction.

Protect from heat and direct sunlight.

Store containers in a well ventilated area.

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:**

Keep away from foodstuffs, beverages and feed.

Wash hands before breaks and at the end of work.

Do not eat or drink while working.

Keep away from tobacco products.

Respiratory protection: Not required.**Protection of hands:**

Protective gloves

Material of gloves: Rubber**Penetration time of glove material**

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

Eye protection:

Goggles are recommended during refilling

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Safety glasses

Body protection: Protective work clothing

SECTION 9: Physical and chemical properties**9.1 Information on basic physical and chemical properties****General Information****Appearance**

Form:	Liquid
Colour:	Light yellow
Odour:	Characteristic
Odour threshold:	Not determined.
pH-value:	No further information available.
Melting point/Melting range:	No further information available.
Boiling point/Boiling range:	227 °C No further information available.

Flash point: 134 °C (COC)
Not applicable.

Flammability (solid, gaseous): Not applicable.

Decomposition temperature: No further information available.

Self-igniting: Product is not selfigniting.

Danger of explosion: Product does not present an explosion hazard.

Explosion limits:

Lower explosive limit: No further information available.
Upper explosive limit: No further information available.

Vapour pressure at 20 °C: 0,1 hPa
No further information available.

Density at 20 °C: 1,26 g/cm³
No further information available.

Relative density 1.26

Vapour density Not determined.

Evaporation rate Not determined.

Solubility in / Miscibility with water: No further information available.

Partition coefficient (n-octanol/water): No further information available.

Viscosity:

Dynamic: Not determined.

Kinematic: Not determined.

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: No decomposition if used according to specifications.

10.3 Possibility of hazardous reactions: May react drastically when exposed to acids, alkali, heat, light.

10.4 Conditions to avoid: Keep away from heat, sparks, flame, high temperature.

10.5 Incompatible materials: Acids, alkali

10.6 Hazardous decomposition products:

Danger of forming toxic pyrolysis products.

Carbon monoxide and carbon dioxide

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SECTION 11: Toxicological information**11.1 Information on toxicological effects****Acute toxicity**

no data

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**

Causes skin irritation.

Serious eye damage/irritation

Causes serious eye irritation.

Respiratory or skin sensitisation

May cause an allergic skin reaction.

CMR effects**Germ cell mutagenicity** Based on available data, the classification criteria are not met.**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.**Chronic study** No further information available.**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:** Toxic for fish**Additional ecological information:****General notes:**

Also poisonous for fish and plankton in water bodies.

Toxic for aquatic organisms

12.5 Results of PBT and vPvB assessment**PBT:** No further relevant information available.**vPvB:** No further relevant information available.**12.6 Other adverse effects:** No further relevant information available.**SECTION 13: Disposal considerations****13.1 Waste treatment methods****Recommendation:**

Must be specially treated adhering to official regulations.

Hand over to hazardous waste disposers.

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, IMDG, IATA

UN3082

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Trade name: OPTODYNE UV-3200

14.2 UN proper shipping name:

ADR:

3082 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.

IMDG:

ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S., MARINE POLLUTANT

IATA:

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

14.3 Transport hazard class(es):

ADR, IMDG, IATA



Class:

9 Miscellaneous dangerous substances and articles.

14.4 Packing group:

ADR:

III

14.5 Environmental hazards:

Marine pollutant:

Yes

Symbol (fish and tree)

Symbol (fish and tree)

Symbol (fish and tree)

Special marking (ADR):

Special marking (IATA):

14.6 Special precautions for user:

Warning: Miscellaneous dangerous substances and articles.

EMS Number:

F-A,S-F

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.

ADR

Limited quantities (LQ):

5L

Excepted quantities (EQ)

Code: E1

Maximum net quantity per inner packaging: 30 ml

Maximum net quantity per outer packaging: 1000 ml

UN "Model Regulation":

UN3082, ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S., 9, III

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

GHS09

Signal word Warning

Hazard-determining components of labelling:

Vinylcyclohexane diepoxide

Poly(Bisphenol-A-co-epichlorohydrin)

Hazard statements

H302+H312+H332 Harmful if swallowed, in contact with skin or if inhaled.

H315

Causes skin irritation.

H319

Causes serious eye irritation.

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H317 May cause an allergic skin reaction.
H351 Suspected of causing cancer.
H411 Toxic 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.
P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P321 Specific treatment (see on this label).
P405 Store locked up.
P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

National regulations No further information available.

Other regulations, limitations and prohibitive regulations: 1

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.

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

Flam. Liq. 3: Flammable liquids, Hazard Category 3

Acute Tox. 3: Acute toxicity, Hazard Category 3

Acute Tox. 4: Acute toxicity, Hazard Category 4

Skin Irrit. 2: Skin corrosion/irritation, Hazard Category 2

Eye Irrit. 2: Serious eye damage/eye irritation, Hazard Category 2

Skin Sens. 1: Sensitisation - Skin, Hazard Category 1

Carc. 2: Carcinogenicity, Hazard Category 2

Aquatic Chronic 2: Hazardous to the aquatic environment - Chronic Hazard, Category 2

*** Data compared to the previous version altered.**