

SECTION 1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Trade Name	OPTOLINQ™ TMC-2100IR
Applications	Optically clear epoxy molding compound for the encapsulation of optoelectronic devices
Advised Against	No further relevant information is available
Supplier Name	Caplinq Europe BV

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SECTION 2. HAZARDS IDENTIFICATION

CLASSIFICATION OF THE SUBSTANCE/MIXTURE

Hazard Class

Skin Sensitization
Skin corrosion or irritation
Hazardous to the aquatic environment, long-term hazard
Serious eye damage/eye irritation

Hazard Category

Category 1, 1A, 1B
Category 2
Category 2
Category 2A

LABEL ELEMENTS

Labeling according to Regulation (EC) no: 1272/2008

Hazard Pictogram



Signal Word

Warning

Hazard Statements

H315 Causes skin irritation
H317 May cause an allergic skin reaction.
H319 Causes serious eye irritation
H411 Toxic to aquatic life with long-lasting effects.

Prevention Precautionary Statements

P261 Avoid breathing dust/fume/gas/mist/vapors/spray.
P264 Wash skin thoroughly after handling
P272 Contaminated work clothing should not be allowed out of the workplace.
P273 Avoid release to the environment.
P280 Wear protective gloves/protective clothing/eye protection/face protection/hearing protection
P254+P265 Wash hands thoroughly after handling. Do not touch eyes.

Response Precautionary Statements

P321 See specific treatment on the label.
P338 Remove contact lenses, if present and easy to do. Continue rinsing.
P352 Wash with plenty of soap and water.
P391 Collect spillage
P301+P316 If swallowed, get emergency medical help immediately.
P302+P352 If on skin, wash with plenty of water.

P332+P317
P337+P317
P362+P364
P305+P351+P338

If skin irritation occurs: Get medical help.
If eye irritation persists: Get medical help.
Take off immediately all contaminated clothing and wash it before reuse
If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do - continue rinsing

Disposal Precautionary Statements

P501 Dispose of contents or container to an approved waste disposal.

OTHER HAZARDS

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

Ecological information:

The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

Toxicological information:

The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

SECTION 3. INGREDIENT COMPOSITION

No.	Components	CAS No.	Proportion (%)
1	Semi-crosslinked epoxy resin	25085-99-8	100

SECTION 4. FIRST AID MEASURES

DESCRIPTION OF FIRST-AID MEASURES

General advice

First aiders should wear appropriate personal protective equipment (see Section 8). Show this Safety Data Sheet to the attending medical personnel.

If inhaled

Move the person to fresh air. Keep them at rest in a position comfortable for breathing. If symptoms persist, consult a doctor.

In case of skin contact

In case of skin contact, do not pull solidified compound off the skin. Immediately wash affected area with soap and water. If skin irritation or symptoms persist, seek medical advice.

In case of eye contact

After eye contact, remove contact lenses if present and easy to do. Rinse eyes immediately with plenty of water for several minutes, keeping eyelids open. If irritation persists, consult an ophthalmologist.

If swallowed

If swallowed, rinse mouth thoroughly with water. Do not induce vomiting. Give the person water to drink if they are fully conscious. Seek medical attention immediately.

MOST IMPORTANT SYMPTOMS AND EFFECTS, BOTH ACUTE AND DELAYED

- Symptoms may include eye and skin irritation, coughing, or respiratory discomfort. See Section 2 and Section 11 for more detailed information on symptoms and health effects.

INDICATION OF ANY IMMEDIATE MEDICAL ATTENTION AND SPECIAL TREATMENT NEEDED

- No specific antidote is known. Symptomatic treatment as needed. Seek medical attention in case of accidental exposure with symptoms.

SECTION 5. FIRE FIGHTING MEASURES

EXTINGUISHING MEDIA

Suitable	Carbon dioxide, dry chemical powder, foam extinguisher and fire-fighting dry sand
Unsuitable	No specific information available.

SPECIAL HAZARDS ARISING FROM SUBSTANCE OR MIXTURE

Fire hazard	Not determined
Hazardous decomposition	Carbon oxides, phenolic compound and other toxic gases.

ADVICE FOR FIREFIGHTERS

Precautions during firefighting Evacuate personnel and isolate the fire area. Keep unauthorized individuals away from the fire area. Move the product to a safe location if possible and ensure the safety of personnel. When extinguishing the fire, maintain a safe position or distance. Water spray may not be effective in putting out the fire. After the fire is fully extinguished and there is no risk of re-ignition, use water spray to cool the fire area and the container holding the product.

Protection during firefighting Firefighting and rescue teams must wear appropriate protective equipment including gloves, glasses, and shoes. Stay in the danger area only with self-contained breathing apparatus.

SECTION 6. ACCIDENTAL RELEASE MEASURES

PERSONAL PRECAUTIONS, PROTECTIVE EQUIPMENT AND EMERGENCY PROCEDURES

Do not attempt to take any action without wearing the proper protective clothing and equipment. Follow emergency procedures and consult an expert. Only trained personnel should handle the cleanup of the spillage. For personal protection information, refer to Section 8.

ENVIRONMENTAL PRECAUTIONS

Do not let products enter drains, drinking water sources, surface water, and soil.

METHODS AND MATERIALS FOR CONTAINMENT AND CLEANING UP

In case of a small spill, contain the material using sand, cloth, or other suitable absorbents. Collect and transfer the waste into a labeled container for proper disposal. If the material can be safely recovered, pump it into a suitable container. Clean any remaining residue using absorbent materials to prevent slip hazards.

For a large spill, contact the fire department, emergency services, or the supplier for assistance. Follow any material restrictions as outlined in Sections 7 and 10. If necessary, perform a final cleaning using steam, solvents, or detergents. Handle the spill with care and dispose of all waste in accordance with local regulations.

REFERENCE TO OTHER SECTIONS

For disposal, see Section 13.

SECTION 7. HANDLING AND STORAGE

PRECAUTIONS FOR SAFE HANDLING

Advice on safe handling	Ensure sufficient ventilation at the workstation. Avoid contact with skin and eyes. Avoid material leakage.
Hygiene measures	Contaminated work clothing should not be worn outside workplace premises. Work clothing should be washed before reuse. Wash hands and face after handling the product. For precautions, see Section 2.

CONDITIONS FOR SAFE STORAGE, INCLUDING ANY INCOMPATIBILITIES

Storage conditions	Store in a tightly closed, dry container. Ensure the storage area is cool, dry, and well-ventilated. For long-term storage, maintain a cold environment at -10 °C. Keep it away from direct sunlight, heat sources, and power outlets. Keep the product locked up or in a secured location accessible only to qualified or authorized personnel.
Storage class	Non-combustible, long term hazard Category 2 / toxic hazardous materials or hazardous materials causing long-term hazard to the aquatic environment.

SECTION 8. EXPOSURE CONTROLS AND PERSONAL PROTECTION

CONTROL PARAMETERS

Exposure Limits

No.	Components	Standards*	Reference
1	Epoxy resin	Not Established	OSHA ¹ , ACGIH ²

¹Occupational Safety and Health Administration (OSHA) 8-hour total weight average (TWA) permissible exposure limit (PEL)

²American Conference of Governmental Industrial Hygienists (ACGIH) 8-hour total weight average (TWA) threshold limit value (TLV)

EXPOSURE CONTROLS

Eye and face protection	Use appropriate eye protective gear, with standard glasses as the minimum requirement.
Hand protection	Wear refractive gloves while working with the product.
Body protection	Suitable protective clothing
Hygiene measure	Adopt appropriate procedures for industrial hygiene. Particularly before eating, drinking, or smoking, wash after handling.
Respiratory protection	Not required under normal conditions of use. Use proper respiratory protective equipment in case of insufficient ventilation and or when aerosol or mist is formed.
Control of environmental exposure	Do not release the product to the environment.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

INFORMATION ON BASIC PHYSICAL AND CHEMICAL PROPERTIES

Appearance	Solid white pellets
Odor	None
pH	Not determined
Melting point	Not determined
Boiling point	Not determined
Flash point	Not determined
Flammability	No data available
Vapor pressure	No data available
Explosive limit	No data available
Auto-ignition temperature	Not determined
Decomposition temperature	No data available
Solubility	Not soluble in water
Viscosity	Not applicable (solid form)
Density at 20°C	1.25 g/cm ³
Partition coefficient (n-octanol/water)	No data available

OTHER INFORMATION

Information with regard to physical hazard classes

No additional information available

Other safety characteristics

No additional information available

SECTION 10. STABILITY & REACTIVITY

Chemical Stability and Reactivity

Stable and non-reactive under ordinary conditions of use and storage.

Materials and Conditions to Avoid

None. See Section 7 for recommended storage and handling conditions.

Hazardous Polymerization

Product does not react spontaneously.

Hazardous Decomposition Products

Under normal conditions of storage and use, hazardous decomposition products should not be produced. Carbon dioxide, along with residual carbon from incomplete combustion and traces of phenolic compounds.

SECTION 11. TOXICOLOGICAL INFORMATION

INFORMATION ON HAZARD CLASSES AS DEFINED (EC) No 1272/2008

Acute Toxicity (Oral)

Toxic if swallowed. May cause irritation to digestive tract.

Acute Toxicity (Dermal)

No significant irritation expected from a single short-term exposure

Acute Toxicity (Inhalation)

No significant effects expected from a single short-term exposure.

Skin corrosion/irritation

May cause skin irritation

Serious eye damage/irritation

May cause temporary redness and discomfort.

Respiratory or skin sensitisation

Not classified, based on available data

Germ cell mutagenicity

Not classified, based on available data

Carcinogenicity

Not classified, based on available data

Reproductive Toxicity

Not classified, based on available data

Specific Target Organ Toxicity
(Single and Repeated Exposure)

Not classified, based on available data

Aspiration hazard

Not classified, based on available data

INFORMATION ON OTHER HAZARDS

Endocrine disrupting properties

Adverse health effects caused by endocrine disrupting properties

The product is not included in the list established in accordance with Article 57(f) of REACH for having endocrine disrupting properties, or is not identified as having endocrine-disrupting properties in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher. To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

Potential adverse human health effects and symptoms

No data available

SECTION 12. ECOLOGICAL INFORMATION

Ecological Toxicity

Prevent from spreading or entering into drains, surface water, groundwater and rivers. The product is considered toxic to aquatic organisms and may cause long-term adverse effects in the aquatic environment.

Hazardous to the aquatic environment, short term (acute)

Not available data

Hazardous to the aquatic environment, long-term (chronic)

Not available data

Mobility in soil

It can undergo decomposition in the soil.

Bioaccumulation

No significant bioaccumulation potential

Persistence and biodegradability

Persistence is unlikely. Epoxy hardeners are not easily biodegradable but can degrade over time under appropriate environmental conditions.

PBT and vPvB assessment

This substance/mixture contains no components considered to be either persistent bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

SECTION 13. DISPOSAL CONSIDERATIONS

WASTE NATURE

Hazardous waste

WASTE TREATMENT METHODS

Disposal of waste needs to be carried out at the city, state, or federally permitted disposal facility. Handle in accordance with applicable regulations and/or local authorities. Do not pour into sewers or surface water, and avoid random disposal. Dispose of all containers or absorbents containing resin as hazardous waste.

WASTE TREATMENT PRECAUTIONS

Warning: Generated waste is hazardous. Do not dump it into sewers, or surface water, or dispose of it improperly. All containers or absorbers containing resin must be treated as hazardous waste.

SECTION 14. TRANSPORT INFORMATION

UN NUMBER OR ID NUMBER

ADR/RID/ADN, IMDG, IATA

UN3077

PROPER SHIPPING NAME

ADR/RID/ADN

ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S (Diglycidyl Bisphenol A Resin)

IMDG

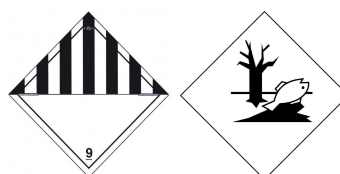
ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S (Diglycidyl Bisphenol A Resin)

IATA

Environmentally hazardous substance, solid, n.o.s (Diglycidyl Bisphenol A Resin)

TRANSPORT HAZARD CLASS

ADR/RID/ADN, IMDG, IATA


Hazard Class

9 Miscellaneous Dangerous Goods and Articles

Label

9

PACKING GROUP

ADR/RID/ADN, IMDG, IATA

III

ENVIRONMENTAL HAZARDS

Marine pollutant

Yes

Special marking (ADR/RID/ADN)

Symbol (fish and tree)

Special marking (IATA)

Symbol (fish and tree)

SPECIAL PRECAUTIONS FOR USER

Warning: Miscellaneous dangerous substances and articles.

Hazard identification number (Kemler code)	90
EMS Number	F-A, S-F
Stowage Category	A

MARITIME TRANSPORT IN BULK ACCORDING TO IMO INSTRUMENTS	Not applicable
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Transport/Additional information

ADR/RID/ADN

Limited quantities (LQ)	5 kg
Excepted quantities (EQ)	E1
Transport category	3
Tunnel restriction code	(-)
UN "Model Regulation"	UN 3077 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (Diglycidyl Bisphenol A Resin), 9, III

TRANSPORTATION PRECAUTIONS

- Ensure the container is leak-proof.
- During transport, prevent falling, tipping, collisions, and exposure to direct sunlight.
- Pack and transport in a sealed container.
- Transportation must adhere to applicable national and international regulations.

This information is not intended to convey all specific regulatory or operational requirements/information relating to this product. Additional transportation system information can be obtained through an authorized safety officer. It is the responsibility of the transporting organization to follow all applicable laws, regulations and rules relating to the transportation of the material.

SECTION 15. REGULATORY INFORMATION

SAFETY, HEALTH AND ENVIRONMENTAL REGULATIONS/LEGISLATION SPECIFIC FOR THE SUBSTANCE OR MIXTURE**Regulation (EC) No. 1907/2006 (REACH) – Annex XVII:**

This substance/mixture does not contain any substances subject to restrictions under Annex XVII.

Regulation (EC) No. 1907/2006 (REACH) – Candidate List of Substances of Very High Concern (SVHC):

None of the ingredients are listed as SVHCs.

Regulation (EC) No. 1272/2008 (CLP):

Classification, labeling, and packaging of substances and mixtures comply with CLP requirements.

Directive 2012/18/EU (Seveso III Directive) – Annex I:

This substance/mixture is not classified as a named dangerous substance under the Seveso III Directive.

Directive 2011/65/EU (RoHS Directive) – Annex II:

The substance is not listed as a restricted material under the RoHS Directive.

NATIONAL REGULATIONS

This substance/mixture is not included in the catalog of hazardous chemicals.

SECTION 16. OTHER INFORMATION

The information in this safety data sheet was obtained from reputable sources and to the best of our knowledge is accurate and current at the mentioned date. Neither CAPLINQ Corporation, nor CAPLINQ Europe BV accept any liability arising out of the use of the information provided here or the use, application or processing of the product described herein.

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