



Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 23.10.2020

Version number 1

Revision: 23.10.2020

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

· 1.1 Product identifier

· **Product name:** 2-(Morpholin-4-yl)ethyl (4E)-6-(4-Hydroxy-6-methoxy-7-methyl-3-oxo-1,3-dihydroisobenzofuran-5-yl)-4-methylhex-4-enoate N-Oxide

· **Part number:** MM1001.07

· **CAS Number:**
224052-51-1

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

No further relevant information available.

· **Application of the substance / the mixture** Reference material for laboratory use only

· 1.3 Details of the supplier of the safety data sheet

· **Manufacturer/Supplier:**

LGC Limited
Queens Road
Teddington
Middlesex TW11 0LY
UNITED KINGDOM

Tel : +44 (0) 20 8943 7000
Fax : +44 (0) 20 8943 2767
eMail : gb@lgcstandards.com
Web : www.lgcstandards.com

· Further information obtainable from:

Product safety department
eMail : sds-request@lgcgroup.com

· 1.4 Emergency telephone number:

For Hazardous Materials or Dangerous Goods Incident
Spill, Leak, Fire Exposure, or Accident
Call CHEMTREC:
USA & Canada 1-800-424-9300
Rest of the world +1 703-741-5970

SECTION 2: Hazards identification

· 2.1 Classification of the substance or mixture

· Classification according to Regulation (EC) No 1272/2008



GHS08 health hazard

Carc. 2	H351	Suspected of causing cancer.
Repr. 2	H361d	Suspected of damaging the unborn child.



GHS09 environment

Aquatic Acute 1	H400	Very toxic to aquatic life.
Aquatic Chronic 1	H410	Very toxic to aquatic life with long lasting effects.

(Contd. on page 2)

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(Contd. from page 1)



GHS07

Acute Tox. 4 H302 Harmful if swallowed.

STOT SE 3 H335-H336 May cause respiratory irritation. May cause drowsiness or dizziness.

· 2.2 Label elements

· Labelling according to Regulation (EC) No 1272/2008

The substance is classified and labelled according to the CLP regulation.

· Hazard pictograms



GHS07



GHS08



GHS09

· Signal word Warning

· Hazard statements

H302 Harmful if swallowed.

H351 Suspected of causing cancer.

H361d Suspected of damaging the unborn child.

H335-H336 May cause respiratory irritation. May cause drowsiness or dizziness.

H410 Very 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.

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.

· 2.3 Other hazards

· Results of PBT and vPvB assessment

· PBT: Not applicable.

· vPvB: Not applicable.

SECTION 3: Composition/information on ingredients

· 3.1 Chemical characterisation: Substances

· CAS No. Description

224052-51-1 2-(Morpholin-4-yl)ethyl (4E)-6-(4-Hydroxy-6-methoxy-7-methyl-3-oxo-1,3-dihydroisobenzofuran-5-yl)-4-methylhex-4-enoate N-Oxide

· Identification number(s) None

· RTECS: -

(Contd. on page 3)



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(Contd. from page 2)

· **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:**
Symptoms of poisoning may occur even after several hours; therefore medical observation for at least 48 hours after the accident is recommended.
- **After inhalation:**
Seek medical treatment in case of complaints.
Take affected persons into fresh air and keep quiet.
- **After skin contact:** Immediately wash with water and soap and rinse thoroughly.
- **After eye contact:** Rinse opened eye for several minutes under running water.
- **After swallowing:**
Rinse mouth. Do not induce vomiting.
Seek medical treatment.
- **4.2 Most important symptoms and effects, both acute and delayed** No further relevant information available.
- **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 respiratory protective device.

SECTION 6: Accidental release measures

- **6.1 Personal precautions, protective equipment and emergency procedures** Avoid formation of dust.
- **6.2 Environmental precautions:**
Inform respective authorities in case of seepage into water course or sewage system.
Do not allow to enter sewers/ surface or ground water.
- **6.3 Methods and material for containment and cleaning up:**
Dispose of contaminated material as waste according to item 13.
- **6.4 Reference to other sections**
See Section 7 for information on safe handling.
See Section 8 for information on personal protection equipment.
See Section 13 for disposal information.

GB

(Contd. on page 4)



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(Contd. from page 3)

SECTION 7: Handling and storage

- **7.1 Precautions for safe handling** Store in cool, dry place in tightly closed receptacles.
- **Information about fire - and explosion protection:** No special measures required.
- **7.2 Conditions for safe storage, including any incompatibilities**
- **Storage:**
- **Requirements to be met by storerooms and receptacles:**
Please refer to the manufacturer's certificate for specific storage and transport temperature conditions.
Store only in the original receptacle unless other advice is given on the CoA.
Keep container in a well-ventilated place. Keep away from sources of ignition and heat.
- **Information about storage in one common storage facility:** Store away from foodstuffs.
- **Further information about storage conditions:** None.
- **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**
- **Ingredients with limit values that require monitoring at the workplace:** Not required.
- **Additional information:** Lists used were valid at the time of SDS preparation.
- **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.
- **Respiratory protection:**
Not required.
Use suitable respiratory protective device in case of insufficient ventilation.
- **Protection of hands:**
The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.
Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation
The protective gloves to be used must comply with the specifications of EC Directive 89/686/EEC and the related standard EN374



Protective gloves

- **Material of gloves** Butyl rubber, BR
- **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.

(Contd. on page 5)



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· **Eye protection:** Safety glasses

(Contd. from page 4)

SECTION 9: Physical and chemical properties

· 9.1 Information on basic physical and chemical properties

· General Information

· Appearance:

Form: Solid

Colour: White

· Odour: Odourless

· Odour threshold: Not determined.

· pH-value: Not applicable.

· Change in condition

Melting point/freezing point: 146-152 °C

Initial boiling point and boiling range: Not determined.

· Flash point: Not applicable.

· Flammability (solid, gas): Not determined.

· Ignition temperature: Not determined

· Decomposition temperature: Not determined.

· Auto-ignition temperature: Not determined.

· Explosive properties: Not determined.

· Explosion limits:

Lower: Not determined.

Upper: Not determined.

· Vapour pressure: Not applicable.

· Density: Not determined.

· Relative density: Not determined.

· Vapour density: Not applicable.

· Evaporation rate: Not applicable.

· Solubility in / Miscibility with Chloroform (Slightly), Methanol (Slightly)

· water: Not determined.

· Partition coefficient: n-octanol/water: Not determined.

· Viscosity:

Dynamic: Not applicable.

Kinematic: Not applicable.

(Contd. on page 6)



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(Contd. from page 5)

· 9.2 Other information

No further relevant information available.

SECTION 10: Stability and reactivity**· 10.1 Reactivity**

Stable under normal conditions.

No further relevant information available.

· 10.2 Chemical stability Stable under normal conditions.**· Thermal decomposition / conditions to be avoided:**

Formation of toxic gases is possible during heating or in case of fire.

· 10.3 Possibility of hazardous reactions No dangerous reactions known.**· 10.4 Conditions to avoid** Heat.**· 10.5 Incompatible materials:** Strong oxidizing agents.**· 10.6 Hazardous decomposition products:**

Formation of toxic gases is possible during heating or in case of fire.

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

Harmful if swallowed.

· Primary irritant effect:**· Skin corrosion/irritation** Based on available data, the classification criteria are not met.**· Serious eye damage/irritation** Based on available data, the classification criteria are not met.**· Respiratory or skin sensitisation** Based on available data, the classification criteria are not met.**· CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)**

Carc. 2, Repr. 2

· Germ cell mutagenicity Based on available data, the classification criteria are not met.**· Carcinogenicity**

Suspected of causing cancer.

· Reproductive toxicity

Suspected of damaging the unborn child.

· STOT-single exposure

May cause respiratory irritation. May cause drowsiness or dizziness.

· 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.

GB

(Contd. on page 7)



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(Contd. from page 6)

SECTION 12: Ecological information

· 12.1 Toxicity

· Aquatic toxicity:

CAS: 128794-94-5 Mycophenolate Mofetil

EC50/48 h >100 mg/l (daphnia)

· 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:

· Remark: Very toxic for fish

· Additional ecological information:

· General notes:

Water hazard class 3 (German Regulation) (Self-assessment): extremely hazardous for water

Do not allow product to reach ground water, water course or sewage system, even in small quantities.

Danger to drinking water if even extremely small quantities leak into the ground.

Also poisonous for fish and plankton in water bodies.

Very toxic for aquatic organisms

· 12.5 Results of PBT and vPvB assessment

· PBT: Not applicable.

· vPvB: Not applicable.

· 12.6 Other adverse effects No further relevant information available.

SECTION 13: Disposal considerations

· 13.1 Waste treatment methods

· Recommendation

Must not be disposed of together with household garbage. Do not allow product to reach sewage system.

· European waste catalogue

Waste disposal key numbers from EWC have to be assigned depending on origin and processing.

· Uncleaned packaging:

· Recommendation: Dispose of in accordance with national regulations.

SECTION 14: Transport information

· 14.1 UN-Number

· ADR, IMDG, IATA

UN3077

(Contd. on page 8)

GB



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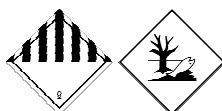
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(Contd. from page 7)

· ADR	3077 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (2-(Morpholin-4-yl)ethyl (4E)-6-(4-Hydroxy-6-methoxy-7-methyl-3-oxo-1,3-dihydroisobenzofuran-5-yl)-4-methylhex-4-enoate N-Oxide)
· IMDG	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (2-(Morpholin-4-yl)ethyl (4E)-6-(4-Hydroxy-6-methoxy-7-methyl-3-oxo-1,3-dihydroisobenzofuran-5-yl)-4-methylhex-4-enoate N-Oxide), MARINE POLLUTANT
· IATA	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (2-(Morpholin-4-yl)ethyl (4E)-6-(4-Hydroxy-6-methoxy-7-methyl-3-oxo-1,3-dihydroisobenzofuran-5-yl)-4-methylhex-4-enoate N-Oxide)

· **14.3 Transport hazard class(es)**· **ADR, IMDG, IATA**

· Class	9 Miscellaneous dangerous substances and articles.
· Label	9

· **14.4 Packing group**· **ADR, IMDG, IATA**

III

· **14.5 Environmental hazards:**

· Marine pollutant:	Symbol (fish and tree)
· Special marking (ADR):	Symbol (fish and tree)
· Special marking (IATA):	Symbol (fish and tree)

· **14.6 Special precautions for user**

Warning: Miscellaneous dangerous substances and articles.

· Danger code (Kemler):	90
· EMS Number:	F-A,S-F
· Stowage Category	A
· Stowage Code	SW23 When transported in BK3 bulk container, see 7.6.2.12 and 7.7.3.9.

· **14.7 Transport in bulk according to Annex II of Marpol and the IBC Code**

Not applicable.

(Contd. on page 9)



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(Contd. from page 8)

· **Transport/Additional information:**

· **ADR**

· **Limited quantities (LQ)**

5 kg

· **Excepted quantities (EQ)**

Code: E1

Maximum net quantity per inner packaging: 30 g

Maximum net quantity per outer packaging: 1000 g

· **Transport category**

3

· **Tunnel restriction code**

-

· **UN "Model Regulation":**

UN 3077 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (2-(MORPHOLIN-4-YL)ETHYL (4E)-6-(4-HYDROXY-6-METHOXY-7-METHYL-3-OXO-1,3-DIHYDROISOBENZOFURAN-5-YL)-4-METHYLHEX-4-ENOATE N-OXIDE), 9, III

SECTION 15: Regulatory information

· **15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**

· **Directive 2012/18/EU**

· **Named dangerous substances - ANNEX I** Substance is not listed.

· **Seveso category E1** Hazardous to the Aquatic Environment

· **Qualifying quantity (tonnes) for the application of lower-tier requirements** 100 t

· **Qualifying quantity (tonnes) for the application of upper-tier requirements** 200 t

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

SECTION 16: Other information

The information in this safety data sheet (SDS) has been prepared with due care and is true and accurate to the best of our knowledge. The user must determine the suitability of the information for its particular purpose, ensure compliance with existing laws and regulations, and be aware that other or additional safety or performance considerations may arise when using, handling and/ or storing the material. The information in this SDS does not purport to be all inclusive or a guarantee as to the properties of the material supplied, and should be used only as a guide. LGC makes no warranties or representations as to the accuracy and completeness of the information contained herein, shall not be held responsible for the suitability of this information for the user's intended purposes or the consequences of such use, and shall not be liable for any damage or loss, howsoever arising, direct or otherwise.

· **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

CAS: Chemical Abstracts Service (division of the American Chemical Society)

PBT: Persistent, Bioaccumulative and Toxic

(Contd. on page 10)



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(Contd. from page 9)

vPvB: very Persistent and very Bioaccumulative

Acute Tox. 4: Acute toxicity – Category 4

Carc. 2: Carcinogenicity – Category 2

Repr. 2: Reproductive toxicity – Category 2

STOT SE 3: Specific target organ toxicity (single exposure) – Category 3

Aquatic Acute 1: Hazardous to the aquatic environment - acute aquatic hazard – Category 1

Aquatic Chronic 1: Hazardous to the aquatic environment - long-term aquatic hazard – Category 1

• **Sources**

Tables 3.1 and 3.2 from Annex 6 of EC 1272/2008, EC 1907/2006, EH40/2005 as amended 2011, Registry of Toxic Effects of Chemical Substances (RTECS), The Dictionary of Substances and their Effects, 1st Edition, IUCLID.

- **Data compared to the previous version altered.** All sections have been updated.