Safety Data Sheet

According to Annex II to REACH - Regulation 2020/878 and to Annex II to UK REACH

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

1.1 Product identifier

Item code	1029/A
Product name	IPER VETRO COMPONENTE A

UFI code: TS00-HOOG-M00E-MWNQ

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

Intended use
protective coating

1.3 Details of the supplier of the safety data sheet

Business name	GIORGIO GRAESAN & FRIENDS S.A.S. DI SHILA GRAESAN
Full address	Via Bergamo, 24
Town	Paderno Dugnano
Postal code	20037
Province	MI
Country	Italy
Phone number	02.9903951
e-mail address of the competent person responsible for the Safety Data Sheet	tecnico@giorgiograesan.it

1.4 Emergency telephone number

For urgent inquiries refer to	UNITED KINGDOM NHS111 in **England**: **111** NHS24 in **Scotland**: **111** NHS Direct in **Wales**: **111** or 0845 4647 In an emergency, if the patient has collapsed or is not breathing properly, call 999

2 Hazards identification

2.1 Classification of the substance or mixture

The product is classified as hazardous pursuant to the provisions set forth in (EC) Regulation 1272/2008 (CLP) (and subsequent amendments and supplements). The product thus requires a safety datasheet that complies with the provisions of (EU) Regulation 2020/878.
Any additional information concerning the risks for health and/or the environment are given in sections 11 and 12 of this sheet.

Hazard classification		
Skin irritation, category 2	H315	Causes skin irritation.
Skin sensitization, category 1	H317	May cause an allergic skin reaction.
Eye irritation, category 2	H319	Causes serious eye irritation.
Hazardous to the aquatic environment, chronic toxicity, category 2	H411	Toxic to aquatic life with long lasting effects.

2.2 Label elements

Hazard labelling pursuant to EC Regulation 1272/2008 (CLP) and subsequent amendments and supplements.

Hazard pictograms


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.

Precautionary statements	
P391	Collect spillage.
P273	Avoid release to the environment.
P261	Avoid breathing.
P280	Wear protective gloves / eye protection / face protection.
P333+P313	If skin irritation or rash occurs: Get medical advice / attention.
P337+P313	If eye irritation persists: Get medical advice / attention.

Contains
2,2'-((1-methylethylidene)bis(4,1-phenyleneoxymethylene))bioxirane
formaldehyde, oligomeric reaction products with 1-chloro-2,3epoxypropane and phenol-epoxy resin bisf F
BENZYL ALCOHOL

VOC (Directive 2004/42/EC)	
Topcoat - All types.	
Volatile organic compounds - ready to use	16 g/l
VOC subcategory limit	420 g/l

2.3 Other hazards

On the basis of available data, the product does not contain any PBT or vPvB in percentage ≥ than 0,1%.
The product does not contain substances with endocrine disrupting properties in concentration ≥ 0.1%.

3 Composition/information on ingredients

3.2 Mixtures

2,2'-((1-methylethylidene)bis(4,1-phenyleneoxymethylene))bioxirane

Concentration	73 ≤ x < 80 %
CAS number	1675-54-3
EC number	216-823-5
INDEX number	603-073-00-2
Hazard classification	▪ Skin Irrit. 2; H315 ▪ Skin Sens. 1; H317 ▪ Eye Irrit. 2; H319 ▪ Aquatic Chronic 2; H411

formaldehyde, oligomeric reaction products with 1-chloro-2,3epoxypropane and phenol-epoxy resin bisf F

Concentration	20.4 ≤ x < 22.5 %
EC number	701-263-0
Registration Number	01-2119454392-40
Hazard classification	▪ Skin Irrit. 2; H315 ▪ Skin Sens. 1; H317 ▪ Aquatic Chronic 2; H411

BENZYL ALCOHOL

Concentration	1.42 ≤ x < 1.57 %
CAS number	100-51-6
EC number	202-859-9
INDEX number	603-057-00-5
Hazard classification	▪ Acute Tox. 4; H302 ▪ Skin Sens. 1B; H317 ▪ Eye Irrit. 2; H319
LD50 (Oral):	1,200 mg/kg

The full wording of hazard (H) phrases is given in section 16 of the sheet.

4 First aid measures

4.1 Description of first aid measures

In case of doubt or in the presence of symptoms contact a doctor and show him this document.
In case of more severe symptoms, ask for immediate medical aid.
EYES: Remove, if present, contact lenses if the situation allows you to do so easily. Wash immediately with plenty of water for at least 15 minutes, opening the eyelids fully. Get medical advice/attention.
SKIN: Take off immediately all contaminated clothing. Wash immediately and thoroughly with running water (and soap if possible). Get medical advice/attention. Avoid further contact with contaminated clothing.
INGESTION: Do not induce vomiting unless explicitly authorised by a doctor. Do not give anything by mouth to an unconscious person. Get medical advice/attention.
INHALATION: Remove victim to fresh air, away from the accident scene. In the event of respiratory symptoms (coughing, wheezing, breathing difficulty, asthma) keep the victim in a comfortable position for breathing. If necessary administer oxygen. If the subject stops breathing, administer artificial respiration. Get medical advice/attention.

Rescuers protection

It is good practice for rescuers lending support to a person who has been exposed to a chemical substance or to a mixture to wear personal protective equipment. The nature of such protection depends on the hazard level of the substance or mixture, on the type of exposure and on the extent of the contamination. In the absence of other more specific indications, use of disposable gloves in the event of possible contact with body fluids is recommended. For the type of PPE suitable for the characteristics of the substance or mixture, see section 8.

4.2 Most important symptoms and effects, both acute and delayed

Specific information on symptoms and effects caused by the product are unknown.
DELAYED EFFECTS: Based on the information currently available, there are no known cases of delayed effects following exposure to this product.

4.3 Indication of any immediate medical attention and special treatment needed

If skin irritation or rash occurs: Get medical advice / attention.

Means to have available in the workplace for specific and immediate treatment

Running water for skin and eye wash.

5 Firefighting measures

5.1 Extinguishing media

SUITABLE EXTINGUISHING EQUIPMENT
The extinguishing equipment should be of the conventional kind: carbon dioxide, foam, powder and water spray.
UNSUITABLE EXTINGUISHING EQUIPMENT
None in particular.

5.2 Special hazards arising from the substance or mixture

HAZARDS CAUSED BY EXPOSURE IN THE EVENT OF FIRE
Do not breathe combustion products.

5.3 Advice for firefighters

GENERAL INFORMATION
Use jets of water to cool the containers to prevent product decomposition and the development of substances potentially hazardous for health. Always wear full fire prevention gear. Collect extinguishing water to prevent it from draining into the sewer system. Dispose of contaminated water used for extinction and the remains of the fire according to applicable regulations.
SPECIAL PROTECTIVE EQUIPMENT FOR FIRE-FIGHTERS
Normal fire fighting clothing i.e. fire kit (BS EN 469), gloves (BS EN 659) and boots (HO specification A29 and A30) in combination with self-contained open circuit positive pressure compressed air breathing apparatus (BS EN 137).

6 Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Block the leakage if there is no hazard.
Wear suitable protective equipment (including personal protective equipment referred to under Section 8 of the safety data sheet) to prevent any contamination of skin, eyes and personal clothing. These indications apply for both processing staff and those involved in emergency procedures.

6.2 Environmental precautions

The product must not penetrate into the sewer system or come into contact with surface water or ground water.

6.3 Methods and material for containment and cleaning up

Collect the leaked product into a suitable container. Evaluate the compatibility of the container to be used, by checking section 10.
Absorb the remainder with inert absorbent material.
Make sure the leakage site is well aired. Contaminated material should be disposed of in compliance with the provisions set forth in point 13.

6.4 Reference to other sections

Any information on personal protection and disposal is given in sections 8 and 13.

7 Handling and storage

7.1 Precautions for safe handling

Before handling the product, consult all the other sections of this material safety data sheet. Avoid leakage of the product into the environment. Do not eat, drink or smoke during use. Remove any contaminated clothes and personal protective equipment before entering places in which people eat.

7.2 Conditions for safe storage, including any incompatibilities

Store only in the original container. Store the containers sealed, in a well ventilated place, away from direct sunlight. Keep containers away from any incompatible materials, see section 10 for details.

Storage class TRGS 510 (Germany)
None

7.3 Specific end use(s)

Information not available.

8 Exposure controls/personal protection

8.1 Control parameters

Information not available.

8.2 Exposure controls

As the use of adequate technical equipment must always take priority over personal protective equipment, make sure that the workplace is well aired through effective local aspiration.
When choosing personal protective equipment, ask your chemical substance supplier for advice.
Personal protective equipment must be CE marked, showing that it complies with applicable standards.
When choosing risk management measures and operating conditions, consult the exposure scenarios attached.
Provide an emergency shower with face and eye wash station.

HAND PROTECTION
Protect hands with category III work gloves (see standard EN 374).
The following should be considered when choosing work glove material: compatibility, degradation, failure time and permeability.
The work gloves' resistance to chemical agents should be checked before use, as it can be unpredictable. The gloves' wear time depends on the duration and type of use.

SKIN PROTECTION
Wear category II professional long-sleeved overalls and safety footwear (see Regulation 2016/425 and standard EN ISO 20344). Wash body with soap and water after removing protective clothing.

EYE PROTECTION
Wear airtight protective goggles (see standard EN 166).

RESPIRATORY PROTECTION
If the threshold value (e.g. TLV-TWA) is exceeded for the substance or one of the substances present in the product, use a mask with a type A filter whose class (1, 2 or 3) must be chosen according to the limit of use concentration. (see standard EN 14387). In the presence of gases or vapours of various kinds and/or gases or vapours containing particulate (aerosol sprays, fumes, mists, etc.) combined filters are required.
Respiratory protection devices must be used if the technical measures adopted are not suitable for restricting the worker's exposure to the threshold values considered. The protection provided by masks is in any case limited.
If the substance considered is odourless or its olfactory threshold is higher than the corresponding TLV-TWA and in the case of an emergency, wear open-circuit compressed air breathing apparatus (in compliance with standard EN 137) or external air-intake breathing apparatus (in compliance with standard EN 138). For a correct choice of respiratory protection device, see standard EN 529.

ENVIRONMENTAL EXPOSURE CONTROLS
The emissions generated by manufacturing processes, including those generated by ventilation equipment, should be checked to ensure compliance with environmental standards.
Product residues must not be indiscriminately disposed of with waste water or by dumping in waterways.

9 Physical and chemical properties

9.1 Information on basic physical and chemical properties

Appearance	viscous liquid	
Colour	Not available	
Odour	mild	
Melting point / freezing point	Not available	
Initial boiling point	> 140 °C (> 284 °F)	
Flammability	Not available	
Lower explosive limit	Not available	
Upper explosive limit	Not available	
Flash point	> 120 °C (> 248 °F)	

Auto-ignition temperature	Not available	
Decomposition temperature	Not available	
pH	Not available	
Kinematic viscosity (40 °C)	Not available	
Solubility	Not available	
Partition coefficient: n-octanol/water	Not available	
Vapour pressure	Not available	
Density and/or relative density	1.15 ≤ x ≤ 1.18 kg/l	
Relative vapour density	Not available	

Particle characteristics

Information not available.

9.2 Other information

9.2.1 Information with regard to physical hazards

Information not available.

9.2.2 Other safety characteristics

Total solids 250°C	77 %	
VOC (Directive 2004/42/EC)	1.3913 % – 16 g/l	

10 Stability and reactivity

10.1 Reactivity

There are no particular risks of reaction with other substances in normal conditions of use.

BENZYL ALCOHOL

Decomposes at temperatures above 870 °C (1,598 °F)
Possibility of explosion

10.2 Chemical stability

The product is stable in normal conditions of use and storage.

10.3 Possibility of hazardous reactions

No hazardous reactions are foreseeable in normal conditions of use and storage.

BENZYL ALCOHOL

May react dangerously with: hydrobromic acid, iron, oxidising agents, sulphuric acid
Risk of explosion on contact with: phosphorus trichloride

10.4 Conditions to avoid

None in particular. However the usual precautions used for chemical products should be respected.

BENZYL ALCOHOL

Avoid exposure to: air, sources of heat, naked flames

10.5 Incompatible materials

BENZYL ALCOHOL

Incompatible with: sulphuric acid, oxidising substances, aluminium

10.6 Hazardous decomposition products

Information not available.

11 Toxicological information

In the absence of experimental data for the product itself, health hazards are evaluated according to the properties of the substances it contains, using the criteria specified in the applicable regulation for classification.
It is therefore necessary to take into account the concentration of the individual hazardous substances indicated in section 3, to evaluate the toxicological effects of exposure to the product.

11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008

11.1.1 Metabolism, toxicokinetics, mechanism of action and other information

Information not available.

11.1.2 Information on likely routes of exposure

Information not available.

11.1.3 Delayed and immediate effects as well as chronic effects from short and long-term exposure

Information not available.

11.1.4 Interactive effects

Information not available.

11.1.5 ACUTE TOXICITY

ATE (Inhalation) of the mixture	Not classified (no significant component)
ATE (Oral) of the mixture	80,000 mg/kg
ATE (Dermal) of the mixture	Not classified (no significant component)

BENZYL ALCOHOL

LD50 (Oral):	1,200 mg/kg	Species/guidelines: Rat
LD50 (Dermal):	2,000 mg/kg	Species/guidelines: Rabbit
LC50 (Inhalation vapours):	> 4.1 mg/l	Exposure duration: 4 hours Species/guidelines: Rat

formaldehyde, oligomeric reaction products with 1-chloro-2,3epoxypropane and phenol-epoxy resin bisf F

LD50 (Oral):	5,000 mg/kg	
LD50 (Dermal):	2,000 mg/kg	

2,2'-((1-methylethylidene)bis(4,1-phenyleneoxymethylene))bioxirane

LD50 (Oral):	19,000 mg/kg	Species/guidelines: Rat
LD50 (Dermal):	> 2,000 mg/kg	Species/guidelines: Rat

11.1.6 SKIN CORROSION/IRRITATION

Causes skin irritation.

11.1.7 SERIOUS EYE DAMAGE / IRRITATION

Causes serious eye irritation.

11.1.8 RESPIRATORY OR SKIN SENSITISATION

Sensitising for the skin

11.1.9 GERM CELL MUTAGENICITY

Does not meet the classification criteria for this hazard class

11.1.10 CARCINOGENICITY

Does not meet the classification criteria for this hazard class

11.1.11 REPRODUCTIVE TOXICITY

Does not meet the classification criteria for this hazard class

11.1.12 STOT - SINGLE EXPOSURE

Does not meet the classification criteria for this hazard class

11.1.13 STOT - REPEATED EXPOSURE

Does not meet the classification criteria for this hazard class

11.1.14 ASPIRATION HAZARD

Does not meet the classification criteria for this hazard class

11.2 Information on other hazards

Based on the available data, the product does not contain substances listed in the main European lists of potential or suspected endocrine disruptors with human health effects under evaluation.

12 Ecological information

Use this product according to good working practices. Avoid littering. Inform the competent authorities, should the product reach waterways or contaminate soil or vegetation.

12.1 Toxicity

formaldehyde, oligomeric reaction products with 1-chloro-2,3epoxypropane and phenol-epoxy resin bisf F

EC50 - for Crustacea	1.6 mg/l	Exposure duration: 48 hours
LC50 - for Fish	5.7 mg/l	Exposure duration: 96 hours
EC50 - for Algae / Aquatic Plants	1.8 mg/l	Exposure duration: 72 hours
Chronic NOEC for Crustacea	300 µg/l	

2,2'-((1-methylethylidene)bis(4,1-phenyleneoxymethylene))bioxirane

EC50 - for Crustacea	2.8 mg/l	Exposure duration: 48 hours
LC50 - for Fish	1.5 mg/l	Exposure duration: 96 hours
EC50 - for Algae / Aquatic Plants	> 11 mg/l	Exposure duration: 72 hours
Chronic NOEC for Crustacea	0.3 mg/l	

12.2 Persistence and degradability

BENZYL ALCOHOL

Degradability	Rapidly degradable

formaldehyde, oligomeric reaction products with 1-chloro-2,3epoxypropane and phenol-epoxy resin bisf F

Solubility in water	20 mg/l
Degradability	NOT rapidly degradable

2,2'-((1-methylethylidene)bis(4,1-phenyleneoxymethylene))bioxirane

Solubility in water	5.4 g/l
Degradability	NOT rapidly degradable

12.3 Bioaccumulative potential

BENZYL ALCOHOL

Partition coefficient n-octanol/water	1.1 LogKow

formaldehyde, oligomeric reaction products with 1-chloro-2,3epoxypropane and phenol-epoxy resin bisf F

Partition coefficient n-octanol/water	2.7 ≤ x ≤ 3.6 LogKow

2,2'-((1-methylethylidene)bis(4,1-phenyleneoxymethylene))bioxirane

Partition coefficient n-octanol/water	2.64 ≤ x ≤ 3.78 LogKow

12.4 Mobility in soil

Information not available.

12.5 Results of PBT and vPvB assessment

On the basis of available data, the product does not contain any PBT or vPvB in percentage ≥ than 0,1%.

12.6 Endocrine disrupting properties

Based on the available data, the product does not contain substances listed in the main European lists of potential or suspected endocrine disruptors with environmental effects under evaluation.

12.7 Other adverse effects

Information not available.

13 Disposal considerations

13.1 Waste treatment methods

Reuse, when possible. Product residues should be considered special hazardous waste. The hazard level of waste containing this product should be evaluated according to applicable regulations.
Disposal must be performed through an authorised waste management firm, in compliance with national and local regulations.
Waste transportation may be subject to ADR restrictions.
The management of waste arising from the use or dispersal of this product must be organised in accordance with occupational safety regulations. See section 8 for possible need for PPE.
CONTAMINATED PACKAGING
Contaminated packaging must be recovered or disposed of in compliance with national waste management regulations.

Hazardous waste classification - Reg. (UE) 1357/2014
HP 4 – Irritant — skin irritation and eye damage
HP 13 – Sensitising
HP 14 – Ecotoxic

14 Transport information

14.1 UN number or ID number

ADR / RID	IMDG	IATA
3082	3082	3082

- In accordance with Special Provision 375, this product, when is packed in receptacles of a capacity ≤ 5Kg or 5L, is not submitted to ADR provisions.
- In accordance with Section 2.10.2.7 of IMDG Code, this product, when is packed in receptacles of a capacity ≤ 5Kg or 5L, is not submitted to IMDG Code provisions.
- In accordance with SP A197, this product, when is packed in receptacles of a capacity ≤ 5Kg or 5L, is not submitted to IATA dangerous goods regulations.

14.2 UN proper shipping name

ADR / RID	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (2,2'-((1-methylethylidene)bis(4,1-phenyleneoxymethylene))bioxirane – formaldehyde, oligomeric reaction products with 1-chloro-2,3epoxypropane and phenol-epoxy resin bisf F)
IMDG	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (2,2'-((1-methylethylidene)bis(4,1-phenyleneoxymethylene))bioxirane – formaldehyde, oligomeric reaction products with 1-chloro-2,3epoxypropane and phenol-epoxy resin bisf F)

IATA	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (2,2'-((1-methylethylidene)bis(4,1-phenyleneoxymethylene))bioxirane – formaldehyde, oligomeric reaction products with 1-chloro-2,3epoxypropane and phenol-epoxy resin bisf F)

14.3 Transport hazard class(es)

	Class:	Label	
ADR / RID	9	9	
IMDG	9	9	
IATA	9	9	

14.4 Packing group

ADR / RID	IMDG	IATA
III	III	III

14.5 Environmental hazards

ADR / RID	Environmentally Hazardous	
IMDG	Marine Pollutant	
IATA	Environmentally Hazardous	

For Air transport, environmentally hazardous mark is only mandatory for UN 3077 and UN 3082.

14.6 Special precautions for user

ADR / RID			
Hazard identification No. - Kemler	90	Limited Quantities	5 L
Tunnel restriction code	(-)	Special provisions	274, 335, 375, 601
IMDG			
EmS	F-A, S-F	Limited Quantities	5 L
IATA			
Maximum quantity (Cargo)	450 L	Packaging instructions (Cargo)	964
Maximum quantity (Passengers)	450 L	Packaging instructions (Passengers)	964
Special provisions	A97, A158, A197, A215		

14.7 Maritime transport in bulk according to IMO instruments

Not applicable

15 Regulatory information

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

Seveso Category - Directive 2012/18/EU:
E2

Restrictions relating to the product or contained substances pursuant to Annex XVII to EC Regulation 1907/2006		
	Restrictions	Registration Number EU
Product restrictions	3	
Contained substance		
	75	

Regulation (EU) 2019/1148 - on the marketing and use of explosives precursors
Not applicable

Substances in Candidate List (Art. 59 REACH)	Registration Number EU
On the basis of available data, the product does not contain any SVHC in percentage ≥ than 0,1%.	

Substances subject to authorisation (Annex XIV REACH)	Authorisation Number	Sunset date	Registration Number EU
None			

Substances subject to exportation reporting pursuant to Regulation (EU) 649/2012:
None

Substances subject to the Rotterdam Convention:
None

Substances subject to the Stockholm Convention:
None

Regulation (EU) 2019/1021 - on persistent organic pollutants
None

Healthcare controls
Workers exposed to this chemical agent must not undergo health checks, provided that available risk-assessment data prove that the risks related to the workers' health and safety are modest and that the 98/24/EC directive is respected.

VOC (Directive 2004/42/EC)
Topcoat - All types.

German regulation on the classification of substances hazardous to water (AwSV, vom 18. April 2017)
WGK2 – Hazard to waters

15.2 Chemical safety assessment

A chemical safety assessment has not been performed for the preparation/for the substances indicated in section 3.

16 Other information

Text of hazard (H) indications mentioned in section 2-3 of the sheet:	
Acute Tox. 4	Acute toxicity, category 4
Aquatic Chronic 2	Hazardous to the aquatic environment, chronic toxicity, category 2
Eye Irrit. 2	Eye irritation, category 2
Skin Irrit. 2	Skin irritation, category 2
Skin Sens. 1	Skin sensitization, category 1
Skin Sens. 1B	Skin sensitization, category 1B
H302	Harmful if swallowed.
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.

Legend

- ADR: European Agreement concerning the carriage of Dangerous goods by Road
- ATE: Acute Toxicity Estimate
- CAS: Chemical Abstract Service Number
- CLP: Regulation (EC) 1272/2008
- DNEL: Derived No Effect Level
- EC50: Effective concentration (required to induce a 50% effect)
- EC: Identifier in ESIS (European archive of existing substances)
- EmS: Emergency Schedule
- GHS: Globally Harmonized System of classification and labeling of chemicals
- IATA DGR: International Air Transport Association Dangerous Goods Regulation
- IC50: Immobilization Concentration 50%
- IMDG: International Maritime Code for dangerous goods
- IMO: International Maritime Organization
- INDEX: Identifier in Annex VI of CLP
- LC50: Lethal Concentration 50%
- LD50: Lethal dose 50%
- OEL: Occupational Exposure Level
- PBT: Persistent, bioaccumulative and toxic
- PEC: Predicted environmental Concentration
- PEL: Predicted exposure level
- PMT: Persistent, mobile and toxic
- PNEC: Predicted no effect concentration
- REACH: Regulation (EC) 1907/2006
- RID: Regulation concerning the international transport of dangerous goods by train
- TLV: Threshold Limit Value
- TLV CEILING: Concentration that should not be exceeded during any time of occupational exposure.
- TWA: Time-weighted average exposure limit
- TWA STEL: Short-term exposure limit
- VOC: Volatile organic Compounds
- vPvB: Very persistent and very bioaccumulative
- vPvM: Very persistent and very mobile
- WGK: Water hazard classes (German).

General Bibliography

1. Regulation (EC) 1907/2006 (REACH) of the European Parliament
2. Regulation (EC) 1272/2008 (CLP) of the European Parliament
3. Regulation (EU) 2020/878 (II Annex of REACH Regulation)
4. Regulation (EC) 790/2009 (I Atp. CLP) of the European Parliament

General Bibliography

5. Regulation (EU) 286/2011 (II Atp. CLP) of the European Parliament
6. Regulation (EU) 618/2012 (III Atp. CLP) of the European Parliament
7. Regulation (EU) 487/2013 (IV Atp. CLP) of the European Parliament
8. Regulation (EU) 944/2013 (V Atp. CLP) of the European Parliament
9. Regulation (EU) 605/2014 (VI Atp. CLP) of the European Parliament
10. Regulation (EU) 2015/1221 (VII Atp. CLP) of the European Parliament
11. Regulation (EU) 2016/918 (VIII Atp. CLP) of the European Parliament
12. Regulation (EU) 2016/1179 (IX Atp. CLP)
13. Regulation (EU) 2017/776 (X Atp. CLP)
14. Regulation (EU) 2018/669 (XI Atp. CLP)
15. Regulation (EU) 2019/521 (XII Atp. CLP)
16. Delegated Regulation (UE) 2018/1480 (XIII Atp. CLP)
17. Regulation (EU) 2019/1148
18. Delegated Regulation (UE) 2020/217 (XIV Atp. CLP)
19. Delegated Regulation (UE) 2020/1182 (XV Atp. CLP)
20. Delegated Regulation (UE) 2021/643 (XVI Atp. CLP)
21. Delegated Regulation (UE) 2021/849 (XVII Atp. CLP)
22. Delegated Regulation (UE) 2022/692 (XVIII Atp. CLP)
23. Delegated Regulation (UE) 2023/707
24. Delegated Regulation (UE) 2023/1434 (XIX Atp. CLP)
25. Delegated Regulation (UE) 2023/1435 (XX Atp. CLP)

- The Merck Index. - 10th Edition
- Handling Chemical Safety
- INRS - Fiche Toxicologique (toxicological sheet)
- Patty - Industrial Hygiene and Toxicology
- N.I. Sax - Dangerous properties of Industrial Materials-7, 1989 Edition
- IFA GESTIS website
- ECHA website
- Database of SDS models for chemicals - Ministry of Health and ISS (Istituto Superiore di Sanità) - Italy

Note for users

The information contained in the present sheet are based on our own knowledge on the date of the last version. Users must verify the suitability and thoroughness of provided information according to each specific use of the product.
This document must not be regarded as a guarantee on any specific product property.
The use of this product is not subject to our direct control; therefore, users must, under their own responsibility, comply with the current health and safety laws and regulations. The producer is relieved from any liability arising from improper uses.
Provide appointed staff with adequate training on how to use chemical products.

Calculation methods for classification

Chemical and physical hazards:
Product classification derives from criteria established by the CLP Regulation, Annex I, Part 2. The data for evaluation of chemical-physical properties are reported in section 9.
Health hazards:
Product classification is based on calculation methods as per Annex I of CLP, Part 3, unless determined otherwise in Section 11.
Environmental hazards:
Product classification is based on calculation methods as per Annex I of CLP, Part 4, unless determined otherwise in Section 12.

Changes from the previous revision

2 Hazards identification
- 2.1 Classification of the substance or mixture
- 2.2 Label elements
- 2.3 Other hazards

3 Composition/information on ingredients

Changes from the previous revision

- 3.2 Mixtures
  - 2,2'-((1-methylethylidene)bis(4,1-phenyleneoxymethylene))bioxirane
- 4 First aid measures
  - 4.1 Description of first aid measures
  - 4.2 Most important symptoms and effects, both acute and delayed
  - 4.3 Indication of any immediate medical attention and special treatment needed
- 5 Firefighting measures
  - 5.1 Extinguishing media
  - 5.2 Special hazards arising from the substance or mixture
  - 5.3 Advice for firefighters
- 6 Accidental release measures
  - 6.1 Personal precautions, protective equipment and emergency procedures
  - 6.2 Environmental precautions
  - 6.3 Methods and material for containment and cleaning up
  - 6.4 Reference to other sections
- 7 Handling and storage
  - 7.1 Precautions for safe handling
  - 7.2 Conditions for safe storage, including any incompatibilities
  - 7.3 Specific end use(s)
- 8 Exposure controls/personal protection
  - 8.1 Control parameters
- 10 Stability and reactivity
  - 10.1 Reactivity
  - 10.2 Chemical stability
  - 10.3 Possibility of hazardous reactions
  - 10.4 Conditions to avoid
  - 10.5 Incompatible materials
  - 10.6 Hazardous decomposition products
- 11 Toxicological information
  - 11.1 Information on toxicological effects
    - Metabolism, toxicokinetics, mechanism of action and other information
    - Information on likely routes of exposure
    - Delayed and immediate effects as well as chronic effects from short and long-term exposure
    - Interactive effects
    - ACUTE TOXICITY
      - 2,2'-((1-methylethylidene)bis(4,1-phenyleneoxymethylene))bioxirane
    - SKIN CORROSION/IRRITATION
    - SERIOUS EYE DAMAGE / IRRITATION
    - RESPIRATORY OR SKIN SENSITISATION
    - GERM CELL MUTAGENICITY
    - CARCINOGENICITY
    - REPRODUCTIVE TOXICITY
    - STOT - SINGLE EXPOSURE
    - STOT - REPEATED EXPOSURE
    - ASPIRATION HAZARD
  - 11.2 Information on other hazards
- 12 Ecological information

Section 16

Changes from the previous revision
12.1 Toxicity
2,2'-((1-methylethylidene)bis(4,1-phenyleneoxymethylene))bioxirane
12.2 Persistence and degradability
2,2'-((1-methylethylidene)bis(4,1-phenyleneoxymethylene))bioxirane
12.3 Bioaccumulative potential
2,2'-((1-methylethylidene)bis(4,1-phenyleneoxymethylene))bioxirane
12.4 Mobility in soil
12.5 Results of PBT and vPvB assessment
12.6 Endocrine disrupting properties
12.7 Other adverse effects
13 Disposal considerations
13.1 Waste treatment methods
15 Regulatory information
15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture
15.2 Chemical safety assessment