according to Regulation (EC) No. 1907/2006 (REACH)

Revision date: 19 Nov 2024 **Print date:** 19 Nov 2024

Version: 7



optiprint guide 405

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

1.1. Product identifier

Trade name/designation:

optiprint guide 405

Other means of identification:

optiprint splint CL

Article No.:

48010 / 48011

1.2. Relevant identified uses of the substance or mixture and uses advised against Use of the substance/mixture:

3 D Druckkunststoff für Herstellung von individuellen Löffeln Only to be used in the 3 D printer and by trained personnel

1.3. Details of the supplier of the safety data sheet

Supplier (manufacturer/importer/only representative/downstream user/distributor):

dentona AG

Feldbachacker 16 44149 Dortmund

Germany

Telephone: 0231-5556-0
Telefax: 0231-5556-30
E-mail: info@dentona.de
Website: www.dentona.com

1.4. Emergency telephone number

No data available

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008 [CLP]

Hazard classes and hazard categories	Hazard statements	Classification procedure
•	H413: May cause long lasting harmful effects to aquatic life.	Calculation method.

2.2. Label elements

Labelling according to Regulation (EC) No. 1272/2008 [CLP]

According to EC directives or the corresponding national regulations the product does not have to be labelled.

Hazard statements for environmental hazards	
H413	May cause long lasting harmful effects to aquatic life.

Supplemental hazard information: none

Precautionary statements Prevention	
P273	Avoid release to the environment.

Precautionary statements Disposal	
P501	Dispose of contents/container to

Special rules for supplemental label elements for certain mixtures:

- 49,0 % percent of the mixture consists of ingredient(s) of unknown acute toxicity (oral).
- 49,0 % percent of the mixture consists of ingredient(s) of unknown acute toxicity (dermal).
- 97,9 % percent of the mixture consists of ingredient(s) of unknown acute toxicity (inhalative).
- 97,9 % percent of the mixture consists of components of unknown hazards to the aquatic environment.

Page 1/10 en / DE

according to Regulation (EC) No. 1907/2006 (REACH)

Revision date: 19 Nov 2024 **Print date:** 19 Nov 2024

Version: 7



optiprint guide 405

2.3. Other hazards

No data available

SECTION 3: Composition/information on ingredients

* 3.2. Mixtures

Hazardous ingredients / Hazardous impurities / Stabilisers:

Product identifiers	Substance name Classification according to Regulation (EC) No 1272/2008 [CLP]	Concentration
CAS No.: 41637-38-1	Bisphenol A (EO)30 Dimethacrylate Aquatic Chronic 4 (H413)	29 - < 60 weight-%
CAS No.: 41637-38-1	Bisphenol A (EO)10 Dimethacrylate The substance is classified as not hazardous according to regulation (EC) No 1272/2008 [CLP].	29 - < 50 weight-%
CAS No.: 75980-60-8 EC No.: 278-355-8 Index No.: 015-203-00-X REACH No.: 01-2119972295-29-XXXX	diphenyl(2,4,6-trimethylbenzoyl)phosphine oxide Candidate List of Substances of Very High Concern for Authorisation! Repr. 2 (H361f) Warning	1 - ≤ 2 weight-%
CAS No.: 2440-22-4 EC No.: 219-470-5 REACH No.: 01-2119583811-34-0001	2-(2H-benzotriazol-2-yl)-p-cresol Aquatic Chronic 1 (H410), Skin Sens. 1B (H317) Warning	0 - ≤ 0.05 weight-%
CAS No.: 7128-64-5 EC No.: 230-426-4 REACH No.: 01-2120089692-44-0000	2,5-thiophenediylbis(5-tert-butyl-1,3-benzoxazole) The substance is classified as not hazardous according to regulation (EC) No 1272/2008 [CLP].	0 - ≤ 0.01 weight-%

Full text of H- and EUH-phrases: see section 16.

SECTION 4: First aid measures

4.1. Description of first aid measures

General information:

When in doubt or if symptoms are observed, get medical advice. In case of accident or unwellness, seek medical advice immediately (show directions for use or safety data sheet if possible). Remove victim out of the danger area. Remove contaminated, saturated clothing. If unconscious but breathing normally, place in recovery position and seek medical advice. Do not leave affected person unattended.

Following inhalation:

In case of irritation of the respiratory tract by the product: Consult a doctor Provide fresh air.

In case of skin contact:

Wash off with plenty of soap and water and rinse.

After eye contact:

In case of contact with eyes, remove contact lenses and immediately rinse with running water for 10 to 15 minutes with the eyelids open and consult an ophthalmologist.

Following ingestion:

Rinse mouth. Let 1 glass of water be drunken in little sips (dilution effect). Get medical advice/attention if you feel unwell. Never give anything by mouth to an unconscious person or a person with cramps. Avoid vomiting

Self-protection of the first aider:

Remove contaminated, saturated clothing.

4.2. Most important symptoms and effects, both acute and delayed

Skin contact: May cause allergic skin reactions. Allergic reactions: Severe eye irritation/irritation

4.3. Indication of any immediate medical attention and special treatment needed

Note to doctor: Treat symptomatically. Treat symptomatically.

Page 2/10 en / DE

according to Regulation (EC) No. 1907/2006 (REACH)

Revision date: 19 Nov 2024 Print date: 19 Nov 2024

Version: 7



optiprint guide 405

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media:

Water spray, foam, dry extinguisher or carbon dioxide. Water spray jet alcohol resistant foam Extinguishing powder Carbon dioxide (CO2)

Unsuitable extinguishing media:

Do not use water jet as extinguishing agent as this will spread the fire.

5.2. Special hazards arising from the substance or mixture

Thermal decomposition or combustion products may contain the following substances: Carbon oxides. Combustible

Hazardous combustion products:

In case of fire: Gases/vapours, toxic

5.3. Advice for firefighters

Protective measures during firefighting: No actions should be taken without appropriate training or that involve personal risk. Wear a self-contained breathing apparatus and chemical protective clothing.

5.4. Additional information

Special protective equipment for fire fighters: Wear positive pressure breathing apparatus (SCBA) and suitable protective clothing. Collect contaminated fire extinguishing water separately. Do not allow entering drains or surface water.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

Personal precautions:

Wear suitable protective clothing, including gloves, goggles / face shield, respirator, boots, clothing or apron, as appropriate, when working. Wear suitable respiratory protection if ventilation is inadequate. Remove persons to safety.

Protective equipment:

Wear protective gloves/protective clothing/eye protection/face protection.

6.1.2. For emergency responders

Personal protection equipment:

Personal protection equipment: see section 8

6.2. Environmental precautions

Environmental precautions Avoid release to the environment. Do not allow to enter drains or water courses. Do not allow to enter into surface water or drains.

6.3. Methods and material for containment and cleaning up

For containment:

Absorb with liquid-binding material (sand, diatomaceous earth, acid- or universal binding agents).

For cleaning up:

Do not smoke, no sparks, flames or other sources of ignition near spills. Bind spilled material with sand or other inert absorbent. Collect and place in a suitable disposal container and seal securely. Containers with collected spilled material must be properly hazard labelled. Spills must be collected and disposed of according to the instructions in chapter 13.

6.4. Reference to other sections

Safe handling: see section 7 Personal protection equipment: see section 8 Disposal: see section 13

6.5. Additional information

Use appropriate container to avoid environmental contamination.

Page 3/10 en / DE

according to Regulation (EC) No. 1907/2006 (REACH)

Revision date: 19 Nov 2024 **Print date:** 19 Nov 2024

Version: 7



optiprint guide 405

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Protective measures

Advices on safe handling:

Protective measures during use: Avoid contact with eyes and skin. Wash contaminated skin thoroughly after handling. Wear suitable protective equipment at work in case of prolonged exposure and / or high concentrations of the vapours, spray or mist.

Wear personal protection equipment (refer to section 8).

Fire prevent measures:

Keep away from heat, sparks and open flame. Mechanical extraction is required if dust is released during handling. Open and handle containers with care. Take precautionary measures against static discharge. Keep away from sources of ignition - No smoking.

Advices on general occupational hygiene

Do not eat, drink or smoke when using this product. Do not eat, drink, smoke or snort in the workplace. Avoid contact with skin, eyes and clothing.

When using do not eat, drink, smoke, sniff. Avoid contact with skin, eyes and clothes.

7.2. Conditions for safe storage, including any incompatibilities

Technical measures and storage conditions:

Keep container tightly closed in a cool, well-ventilated place.

Requirements for storage rooms and vessels:

Store at temperatures between 5°C and 30°C. Protect from frost and direct sunlight. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. Do not smoke.

Storage class (TRGS 510, Germany): 10 – Combustible liquids that cannot be assigned to any of the above storage classes

7.3. Specific end use(s)

Recommendation:

The intended uses of this product are described in section 1.2.

SECTION 8: Exposure controls/personal protection

* 8.1. Control parameters

No data available

* 8.2. Exposure controls

8.2.1. Appropriate engineering controls

Ensure sufficient room ventilation and local exhaust ventilation. The occupational exposure limits of the product or the ingredients must be observed.

8.2.2. Personal protection equipment





Eye/face protection:

Eye protection conforming to a recognised standard should be worn if a risk assessment indicates that eye contact is possible. The following personal protective clothing should be worn: Frame goggles with side shields. DIN EN 166

Eye glasses with side protection EN 166

Skin protection:

Avoid contact with the skin. Wear suitable clothing to prevent possible skin contact.

Wear protective gloves. According to the data provided by the protective glove manufacturers, it is necessary to check during their use whether the gloves retain their repellent properties and to change

Page 4/10 en / DE

according to Regulation (EC) No. 1907/2006 (REACH)

Revision date: 19 Nov 2024 **Print date:** 19 Nov 2024

Version: 7



optiprint guide 405

them as soon as damage is detected. For exposures up to 8 hours, wear protective gloves made of the following material: nitrile rubber.

Tested protective gloves must be worn EN ISO 374 Suitable material: Breakthrough time: min In the case of wanting to use the gloves again, clean them before taking off and air them well. Breakthrough times and swelling properties of the material must be taken into consideration.

Respiratory protection:

Suitable respiratory protection must be worn if ventilation is inadequate. Wear a respirator with full face shield and the following filter cartridge: Filter against organic vapours. High efficiency particulate filters.

Filtering device with filter or ventilator filtering device of type: A A A

Other protection measures:

Wash contaminated skin thoroughly after handling. Wash contaminated clothing and skin immediately with plenty of water before removing clothing. Remove all contaminated clothing immediately and wash before wearing again. Do not wear contaminated work clothing outside the workplace. Do not eat, drink or smoke when using this product.

8.2.3. Environmental exposure controls

No data available

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Appearance

Physical state: Liquid Colour: transparent

Odour: ester

Safety relevant basis data

Parameter	Value	at °C	① Method
			② Remark
pH	6 - 8	25 °C	
Melting point	No data available		
Freezing point	No data available		
Initial boiling point and boiling range	≥ 195 °C		
Flash point	> 250 °C		
Evaporation rate	No data available		
Auto-ignition temperature	No data available		
Upper/lower flammability or explosive limits	No data available		
Vapour pressure	No data available		
Vapour density	No data available		
Density	No data available		
Bulk density	not applicable		
Water solubility	No data available		
Dynamic viscosity	No data available		
Kinematic viscosity	No data available		

9.2. Other information

No data available

SECTION 10: Stability and reactivity

10.1. Reactivity

There is no information available Combustible

10.2. Chemical stability

Stable at normal room temperatures

Page 5/10 en / DE

according to Regulation (EC) No. 1907/2006 (REACH)

Revision date: 19 Nov 2024 **Print date:** 19 Nov 2024

Version: 7



optiprint guide 405

10.3. Possibility of hazardous reactions

Can polymerise

10.4. Conditions to avoid

Reaction with light, risk of polymerisation. Protect from heat, flames and other ignition sources.

Do not expose to high temperatures or direct sunlight. Avoid contact with Avoid contact with strong oxidising agents.

10.5. Incompatible materials

Keep away from free-radical initiators, peroxides, strongly alkaline substances and reactive metals to avoid exothermic polymerisation reactions.

10.6. Hazardous decomposition products

Carbon oxides

Gases/vapours, toxic

SECTION 11: Toxicological information

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

Bisphenol A (EO)30 Dimethacrylate CAS No.: 41637-38-1

LD₅₀ oral: >2,000 mg/kg (Rat)

LD₅₀ dermal: >2,000 mg/kg (Rat)

diphenyl(2,4,6-trimethylbenzoyl)phosphine oxide CAS No.: 75980-60-8 EC No.: 278-355-8

LD₅₀ oral: >5,000 mg/kg (Ratte)

LD₅₀ dermal: >2,000 mg/kg (Ratte)

LC₅₀ Acute inhalation toxicity (dust/mist): >2,000 mg/L (Rat)

2-(2H-benzotriazol-2-yl)-p-cresol CAS No.: 2440-22-4 EC No.: 219-470-5

LD₅₀ oral: >10,000 mg/kg (Ratte) OECD-Richtlinie 423

LC₅₀ Acute inhalation toxicity (dust/mist): >0.59 mg/L 4 h (Ratte) OECD-Richtlinie 403

2,5-thiophenediylbis(5-tert-butyl-1,3-benzoxazole) CAS No.: 7128-64-5 EC No.: 230-426-4

LD₅₀ oral: 10,000 mg/kg (Ratte)

LD₅₀ dermal: >2,000 mg/kg (Ratte)

LC₅₀ Acute inhalation toxicity (dust/mist): >1.82 mg/L 4 h (Ratte)

Acute oral toxicity:

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

Acute dermal toxicity:

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

Acute inhalation toxicity:

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

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.

Germ cell mutagenicity:

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

Carcinogenicity:

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

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.

Page 6/10 en / DE

according to Regulation (EC) No. 1907/2006 (REACH)

Revision date: 19 Nov 2024 **Print date:** 19 Nov 2024

Version: 7



optiprint guide 405

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.

Additional information:

No data available

11.2. Information on other hazards

No data available

SECTION 12: Ecological information

* 12.1. Toxicity

diphenyl(2.4.6-trimethylbenzoyl)phosphine oxide	CAS No.:	75980-60-8	FC No.:	278-355-8

LC₅₀: =6.53 mg/L 2 d (fish, Oryzias latipes)

LC₅₀: 10 mg/L 4 d (fish, Danio rerio)

LC₅₀: 6.53 mg/L 2 d (Oryzias latipes)

EC50: >2.01 mg/L 3 d (Algae/water plant, Pseudokirchneriella subcapitata, Oryzias latipes (Mikroorganismen))

EC₅₀: >1,000 mg/L (Activated sludge)

EC₅₀: =3.53 mg/L 2 d (Algae/water plant, Daphnia magna)

2-(2H-benzotriazol-2-yl)-p-cresol CAS No.: 2440-22-4 EC No.: 219-470-5

LC₅₀: >0.17 mg/L 4 d (fish, Oncorhynchus mykiss (Belebtschlamm)) OECD 203, semistatisch

LC₅₀: >0.17 mg/L 4 d (fish, Oncorhynchus mykiss Activated sludge) OECD 203 semistatic

EC₅₀: >1,000 mg/L 1 d (Daphnia magna) OECD 202, Teil 1, statisch

EC50: >0.0822 mg/L 3 d (Algae/water plant, Pseudokirchneriella subcapitata) OECD 201

EC₅₀: >1,000 mg/L 1 d (Daphnia magna) OECD 202 Teil 1, statisch

NOEC: 0.013 mg/L 21 d (Algae/water plant, Daphnia magna) OECD 21, semistatisch

NOEC: >1,000 mg/L 56 d (Algae/water plant) OECD 216, ntürlicher Boden

NOEC: >1,000 mg/L 28 d (Algae/water plant, Alge) OECD 208

2,5-thiophenediylbis(5-tert-butyl-1,3-benzoxazole) CAS No.: 7128-64-5 EC No.: 230-426-4

LC₅₀: >100 mg/L 4 d (fish, Brachydanio rerio (Belebtschlamm))

LC₅₀: >100 mg/L 4 d (fish, Brachydanio rerio Activated sludge)

EC₅₀: >100 mg/L 3 d (Algae/water plant, Pseudokirchneriella subcapitata)

EC₅₀: >100 mg/L 3 d (Algae/water plant, Pseudokirchneriella subcapitata)

EC₅₀: >100 mg/L

Aquatic toxicity:

May cause long lasting harmful effects to aquatic life.

12.2. Persistence and degradability

No data available

12.3. Bioaccumulative potential

No data available

12.4. Mobility in soil

No data available

12.5. Results of PBT and vPvB assessment

Bisphenol A (EO)10 Dimethacrylate CAS No.: 41637-38-1

Results of PBT and vPvB assessment: —

Bisphenol A (EO)30 Dimethacrylate CAS No.: 41637-38-1

Results of PBT and vPvB assessment: —

diphenyl(2,4,6-trimethylbenzoyl)phosphine oxide CAS No.: 75980-60-8 EC No.: 278-355-8

Results of PBT and vPvB assessment: —

Page 7/10 en / DE

according to Regulation (EC) No. 1907/2006 (REACH)

Revision date: 19 Nov 2024 **Print date:** 19 Nov 2024

Version: 7



optiprint guide 405

2-(2H-benzotriazol-2-yl)-p-cresol CAS No.: 2440-22-4 EC No.: 219-470-5

Results of PBT and vPvB assessment: —

2,5-thiophenediylbis(5-tert-butyl-1,3-benzoxazole) CAS No.: 7128-64-5 EC No.: 230-426-4

Results of PBT and vPvB assessment: -

12.6. Endocrine disrupting properties

No data available

12.7. Other adverse effects

No data available

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Dispose of waste according to applicable legislation.

Waste treatment options

Appropriate disposal / Product:

Consult the appropriate local waste disposal expert about waste disposal.

Appropriate disposal / Package:

Contact the responsible, authorised waste disposal company about waste disposal.

Other disposal recommendations:

Avoid release to the environment.

SECTION 14: Transport information

Land transport (ADR/RID)	(ADN)	Sea transport (IMDG)	Air transport (ICAO-TI / IATA-DGR)
14.1. UN number or	ID number	,	
No dangerous good in sense of these transport regulations.	No dangerous good in sense of these transport regulations.	No dangerous good in sense of these transport regulations.	No dangerous good in sense of these transport regulations.
14.2. UN proper ship	ping name		
No dangerous good in sense of these transport regulations.	No dangerous good in sense of these transport regulations.	No dangerous good in sense of these transport regulations.	No dangerous good in sense of these transport regulations.
14.3. Transport haza	rd class(es)		_
not relevant	not relevant	not relevant	not relevant
14.4. Packing group			
not relevant	not relevant	not relevant	not relevant
14.5. Environmental	hazards		
not relevant	not relevant	not relevant	not relevant
14.6. Special precau	tions for user		
not relevant	not relevant	not relevant	not relevant

14.7. Maritime transport in bulk according to IMO instruments

No data available

SECTION 15: Regulatory information

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

15.1.1. EU legislation

Authorisations:

EU regulations

Page 8/10 en / DE

according to Regulation (EC) No. 1907/2006 (REACH)

Revision date: 19 Nov 2024 Print date: 19 Nov 2024

Version: 7



optiprint guide 405

15.1.2. National regulations

[DE] National regulations

Restrictions of occupation

There is no information available

Störfallverordnung (12. BlmschV) for substances contained in the product:

Not subject to the Major Accidents Ordinance

Technische Anleitung zur Reinhaltung der Luft (TA-Luft)

Klasse 1:

No subject to TA-Luft.

Water hazard class

WGK:

1 - slightly hazardous to water

15.2. Chemical Safety Assessment

Chemical safety assessments for substances in this mixture have not been carried out

SECTION 16: Other information

16.1. Indication of changes

3.2.	Mixtures
8.1.	Control parameters
8.2.	Exposure controls
11.1.	Information on hazard classes as defined in Regulation (EC) No 1272/2008
12.1.	Toxicity
12.5.	Results of PBT and vPvB assessment
16.5.	List of relevant hazard statements and/or precautionary statements from sections 2 to 15

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Ų	12.5.	Results of PBT and VPVB assessment
	16.5.	List of relevant hazard statements and/or precautionary statements from sections 2 to 15
	. 6.2. <i>F</i> ADN	Abbreviations and acronyms European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways

ADR European Agreement concerning the International Carriage of Dangerous Goods by Road

CAS Chemical Abstracts Service

CLP Classification, Labelling and Packaging

DIN German Institute for Standardization / German Industrial Standard

derived no-effect level **DNEL** Effective Concentration 50% EC₅₀

 EN European Standard

ICAO International Civil Aviation Organization **IMDG** International Maritime Dangerous Goods International Maritime Organization IMO Lethal (fatal) Concentration 50% LC₅₀

 LD_{50} Lethal (fatal) Dose 50%

National Fire Protection Association **NFPA** NOEC No Observed Effect Concentration

OECD Organisation for Economic Cooperation and Development

persistent and bioaccumulative and toxic PBT

PNEC Predicted No Effect Concentration

REACH Registration, Evaluation and Authorization of Chemicals RID Dangerous goods regulations for transport by rail

TRGS Technische Regeln für Gefahrstoffe

United Nations UN

16.3. Key literature references and sources for data

REGULATION (EC) No 1272/2008 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 16 December

on classification, labelling and packaging of substances and mixtures, amending and repealing of Directives 67/548/EEC and 1999/45/EC and amending Regulation (EC) No 1907/2006.

> Page 9/10 en / DE

according to Regulation (EC) No. 1907/2006 (REACH)

Revision date: 19 Nov 2024 **Print date:** 19 Nov 2024

Version: 7



optiprint guide 405

16.4. Classification for mixtures and used evaluation method according to regulation (EC) No 1272/2008 [CLP]

Hazard classes and hazard categories	Hazard statements	Classification procedure
Hazardous to the aquatic environment (Aquatic Chronic 4)	H413: May cause long lasting harmful effects to aquatic life.	Calculation method.

16.5. List of relevant hazard statements and/or precautionary statements from sections 2 to 15

Hazard statements	
H317	May cause an allergic skin reaction.
H361f	Suspected of damaging fertility.
H410	Very toxic to aquatic life with long lasting effects.
H413	May cause long lasting harmful effects to aquatic life.

16.6. Training advice

As from 24 August 2023 adequate training is required before industrial or professional use.

16.7. Additional information

This information is based on our current knowledge and is intended to describe the product in terms of health, safety and environmental conditions only. It should therefore not be construed as a guarantee of any specific property of the product.

DISCLAIMER We have obtained the information contained in this data sheet from sources we believe to be reliable. The accuracy of the information, whether expressed or implied, cannot be guaranteed. The conditions or methods of handling, storage, use or disposal of the product are beyond our control and possibly beyond our knowledge. For these and other reasons, we assume no responsibility and expressly disclaim liability for any loss, damage or expense which may arise from or be in any way connected with the handling, storage, use or disposal of the product. This safety data sheet has been prepared for this product and may only be used for this product. If the product is used as a component of another product, the information given in the data sheet may not apply. End of safety data sheet

End of safety data sheet

- * Data changed compared with the previous version.
- * Data changed compared with the previous version.

Page 10/10 en / DE

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