

Material Safety Data Sheet

Conforms to OSHA Hazard Communication Standard (HCS) (29 CFR 1910.1200 / revised 2024)

ZChek- DL Aerosol

Section 1: Product and Company identification

1.1 Product Name: ZChek- DL Aerosol**1.2 Product Use:** Liquid Penetrant Inspection Process.**1.3 Manufacturer Information:** ZChem Specialities Private Limited.

Sy No11/2/6, Puradapalya village, Tavarekere Hobli Bangalore,Karnataka-562130, India

1.4 Supplier : ZChem Specialities USA LLC

1115 E cottonwood Ln, Suite 150, Casa Grande, AZ 85122

1.5 Emergency Telephone Number:+91-9959963334

Section 2: Hazards Identification

OSHA/HCS STATUSThis material is considered hazardous by the OSHA Hazard Communication Standard
(29 CFR 1910.1200)**2.1. CLASSIFICATION OF THE SUBSTANCE OR MIXTURE**

Aerosol 1; H222, H229, Extremely flammable aerosol. Pressurised container: May burst if heated.

Eye Irrit. 2; H319, Causes serious eye irritation.

STOT SE 3; H336, May cause drowsiness or dizziness.

2.2 Label Elements**Hazardous symbol**

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Signal word	: Danger
Hazard statement(s)	: Extremely flammable aerosol. Pressurised container: May burst if heated. (H222, H229) Causes serious eye irritation. (H319) May cause drowsiness or dizziness. (H336)
Precautionary statement(s)	:
General	: -
Prevention	: Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. (P210) Do not spray on an open flame or other ignition source. (P211) Do not pierce or burn, even after use. (P251) Avoid breathing spray. (P261) Wear eye protection/protective gloves. (P280)
Response	: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. (P305+P351+P338) Call a POISON CENTER/doctor if you feel unwell. (P312) If eye irritation persists: Get medical advice/attention. (P337+P313)
Storage	: Store in a well-ventilated place. Keep container tightly closed. (P403+P233) Protect from sunlight. Do not expose to temperatures exceeding 50 °C/122°F. (P410+P412)
Disposal	: Dispose of contents/container in accordance with local regulation (P501)
Additional labelling	: Not applicable.

2.3. OTHER HAZARDS

Additional warnings	: In the event of leaks, high concentrations of gases can quickly form. They can be toxic, asphyxiating, or explosive.
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Section 3: Information and Ingredients

3.1. SUBSTANCES

Not applicable. This product is a mixture.

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3.2. MIXTURES

Product/substance	Identifiers	%w/w	Classification	Note
propan-2-ol	CAS No.: 67-63-0	40-60%	Flam. Liq.2, H225 Eye Irrit,2-H319 STOT SE3, H336	
Petroleum gases, liquefied sweetened	CAS No. 6847-86-8	25-40%	Flam.Gas 1A, H220 Press.Gas(liq), H280	(19)
acetone;propan-2 -one;propanone	CAS No.: 67-64-1	10-15%	Flam. Liq. 2, H225 Eye Irrit. 2, H319 STOT SE 3, H336 Repeated exposure may cause skin dryness or cracking	

Where the concentration of an ingredient is expressed as a range the exact concentration has been withheld as a trade secret.

See full text of H-phrases in section 16. Occupational exposure limits are listed in section 8, if these are available.

OTHER INFORMATION

[19] UVCB = Unknown or variable composition, complex reaction products or of biological materials

Section 4: First Aid Measures

4.1. DESCRIPTION OF FIRST AID MEASURES

General information	: If breathing is irregular, drowsiness, loss of consciousness or cramps: Call 911 and give immediate treatment (first aid). Contact a doctor if in doubt about the injured person's condition or if the symptoms persist. Never give an unconscious person water or other drink.
Inhalation	: Upon breathing difficulties or irritation of the respiratory tract: Bring the person into fresh air and stay with him/her.
Skin contact	: Upon irritation: rinse with water. In the event of continued irritation, seek medical assistance.
Eye contact	: If in eyes: Flush eyes immediately with plenty of water or isotonic water (20-30 °C) for at least 5 minutes and continue until irritation stops. Remove contact lenses. Make sure to flush under upper and lower eyelids. If irritation continues, contact a doctor. Continue flushing during transport.

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- Ingestion : If the person is conscious, rinse the mouth with water and stay with the person. Never give the person anything to drink. In case of malaise, seek medical advice immediately and bring the safety data sheet or label from the product. Do not induce vomiting, unless recommended by the doctor. Have the person lean forward with head down to avoid inhalation of or choking on vomited material.
- Burns : Rinse with water until pain stops then continue to rinse for 30 minutes.

4.2 MOST IMPORTANT SYMPTOMS AND EFFECTS, BOTH ACUTE AND DELAYED

- Irritation effects : This product contains substances, which may cause irritation upon exposure to skin, eyes or lungs. Exposure may result in an increased absorption potential of other hazardous substances at the area of exposure.
- Neurotoxic effects : This product contains organic solvents, which may cause adverse effects to the nervous system. Symptoms of neurotoxicity include: loss of appetite, headache, dizziness, ringing in ears, tingling sensations of skin, sensitivity to the cold, cramps, difficulty in concentrating, tiredness, etc. Repeated exposure to solvents can result in the breaking down of the skin's natural fat layer and may result in an increased absorption potential of other hazardous substances at the area of exposure.

4.3 INDICATION OF ANY IMMEDIATE MEDICAL ATTENTION AND SPECIAL TREATMENT NEEDED

If eye irritation persists: Get medical advice/attention.

INFORMATION TO MEDICS

Bring this safety data sheet or the label from this product

Section 5: Fire Fighting Measures

5.1. EXTINGUISHING MEDIA

- Suitable extinguishing media : Alcohol-resistant foam, carbon dioxide, powder, water mist.
Unsuitable extinguishing media : Waterjets should not be used, since they can spread the fire.

5.2. SPECIAL HAZARDS ARISING FROM THE SUBSTANCE OR MIXTURE

Extremely flammable aerosol. Pressurised container. In a fire or if heated, a pressure increase will occur and the container may burst.
In use may form flammable/explosive vapour-air mixture.
Fire will result in dense smoke. Exposure to combustion products may harm your health.
Closed containers, which are exposed to fire, should be cooled with water.
Do not allow fire extinguishing water to enter the sewage system and nearby surface waters.

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If the product is exposed to high temperatures, e.g. in the event of fire, dangerous decomposition compounds are produced.

These are:

Carbon oxides (CO / CO₂)

Some metal oxides

5.3. ADVICE FOR FIREFIGHTERS

Wear self-contained breathing apparatus and protective clothing to prevent contact.

Section 6: Accidental Release Measures

6.1 PERSONAL PRECAUTIONS, PROTECTIVE EQUIPMENT AND EMERGENCY PROCEDURES

Accidental releases always pose a serious risk of fire or explosion.

Storages not yet ignited must be cooled by water mist. Remove flammable materials if conditions allow it. Ensure sufficient ventilation.

Ensure adequate ventilation, especially in confined areas.

Avoid inhalation of vapours from spilled material.

6.2 ENVIRONMENTAL PRECAUTIONS

Avoid discharge to lakes, streams, sewers, etc.

Keep unauthorized persons away from the spill

6.3 METHODS AND MATERIAL FOR CONTAINMENT AND CLEANING UP

Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations. Wherever possible cleaning should be performed with normal cleaning agents. Avoid use of solvents.

6.4. REFERENCE TO OTHER SECTIONS

See section 13 "Disposal considerations" on handling of waste.

See section 8 "Exposure controls/personal protection" for protective measures.

Section 7: Handling and Storage

7.1 PRECAUTIONS FOR SAFE HANDLING

Do not spray on an open flame or other ignition source.

Do not pierce or burn, even after use.

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If any of the following conditions exist, the material may be explosively unstable and will require stabilization prior to use:

1. Material appears to be degraded and or contaminated.
2. Material appears to be discolored.
3. Deterioration or distortion of storage container.
4. Thermal shock (sunlight).
5. Age of material exceeds recommended storage time.

Avoid contact during pregnancy and while nursing. Smoking, drinking and consumption of food is not allowed in the work area.

See section 8 "Exposure controls/personal protection" for information on personal protection.

7.2. CONDITIONS FOR SAFE STORAGE, INCLUDING ANY INCOMPATIBILITIES

Store in tightly closed containers and store protected from moisture and light. Containers should be dated when opened and tested periodically for the presence of peroxides. Do not exceed storage time limits.

Must be stored in a cool and well-ventilated area, away from possible sources of ignition.

Pressurized gas packs (spray cans, aerosol cans) must be stored behind a wire mesh, which allows gases to escape and holds back packs flying around.

Recommended storage material	: Always store in containers of the same material as the original container.
Storage conditions	: No specific requirements
Incompatible materials	: Strong acids, strong bases, strong oxidizing agents, and strong reducing agents.

7.3. SPECIFIC END USE(S)

This product should only be used for applications quoted in section 1.2.

Section 8: Exposure Control

8.1. CONTROL PARAMETERS

propan-2-ol

Short term exposure limit (STEL) (ACGIH TLV) (ppm): 400

Short term exposure limit (STEL) (NIOSH REL) (ppm): 500

Long term exposure limit (OSHA Table Z-1) (mg/m³): 980

Long term exposure limit (OSHA Table Z-1) (ppm): 400

Long term exposure limit (ACGIH TLV) (ppm): 200

Petroleum gases, liquefied, sweetened

Long term exposure limit (OSHA Table Z-1) (ppm): 1000

acetone;propan-2-one;propanone

Short term exposure limit (STEL) (ACGIH TLV) (mg/m³): 1188

Short term exposure limit (STEL) (ACGIH TLV) (ppm): 500

Long term exposure limit (OSHA Table Z-1) (mg/m³): 2400

Long term exposure limit (OSHA Table Z-1) (ppm): 1000

Long term exposure limit (ACGIH TLV) (ppm): 250

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Part 1910 - Occupational Safety and Health Standards
(29 CFR 1910.1000 TABLE Z-1 - Limits for Air Contaminants)

8.2. EXPOSURE CONTROLS

Compliance with the given occupational exposure limits values should be controlled on a regular basis.

- General recommendations : Smoking, drinking and consumption of food is not allowed in the work area.
- Exposure scenarios : There are no exposure scenarios implemented for this product.
- Exposure limits : Professional users are subjected to the legally set maximum concentrations for occupational exposure. See occupational hygiene limit values above.
- Appropriate technical measures : Apply standard precautions during use of the product. Avoid inhalation of gas or dust
- Hygiene measures : In between use of the product and at the end of the working day all exposed areas of the body must be washed thoroughly. Pay special attention to hands, forearms and face.
- Measures to avoid environmental exposure : No specific requirements

INDIVIDUAL PROTECTION MEASURES, SUCH AS PERSONAL PROTECTIVE EQUIPMENT

Generally : Use only protective equipment with a recognized certification mark.
e.g. the UL mark.

Respiratory Equipment :

TYPE	COLOUR	CLASS	STANDARD	
In case of inadequate ventilation wear respiratory protection. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.				

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Skin protection : No specific requirements.

Recommended	Type/Category	Standards	
Dedicated work clothing should be worn.	-	-	

Hand protection :

Material	Glove thickness (mm)	Breakthrough time (min.)	Standards	
Nitrile	0,38	> 480	EN374-2, EN374-3, EN388	

Eye protection :

Type	Standards	
Safety glasses	EN166	

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1. INFORMATION ON BASIC PHYSICAL AND CHEMICAL PROPERTIES

Physical state	: Aerosol
Color	: White
Odor	: Alcohol odor
Odor threshold (ppm)	: No data available
pH	: Neutral
Density (g/cm ³)	: No data available
Relative density	: No data available
Kinematic viscosity	: No data available
Particle characteristics	: No data available

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PHASE CHANGES

Melting point/freezing point (°F)	: Not applicable - product is an aerosol
Softening point/range (°F)	: Does not apply to aerosols.
Boiling point (°F)	: No data available
Vapor pressure	: No data available
Relative vapor density	: No data available
Decomposition temperature (°F)	: No data available

DATA ON FIRE AND EXPLOSION HAZARDS

Flash point (°F)	: Not applicable - product is an aerosol
Flammability (°F)	: The material is ignitable.
Auto-ignition temperature (°F)	: No data available
Explosion limits (% v/v)	: No relevant or available data due to the nature of the product.

SOLUBILITY

Solubility in water	: No data available
n-octanol/water coefficient (LogKow)	: No data available
Solubility in fat (g/L)	: No data available

9.2. OTHER INFORMATION

Evaporation rate (n butylacetate = 100)	: No data available
VOC (g/L)	: 765.06
Other physical and chemical parameters	: No data available
Oxidizing properties	: No data available

SECTION 10: STABILITY AND REACTIVITY

10.1. REACTIVITY

No data available.

10.2. CHEMICAL STABILITY

The product is stable under the conditions, noted in section 7 "Handling and storage".

10.3. POSSIBILITY OF HAZARDOUS REACTIONS, INCLUDING THOSE ASSOCIATED WITH FORESEEABLE EMERGENCIES

None known.

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10.4. CONDITIONS TO AVOID

Avoid static electricity. Do not expose to any forms of heat (e.g. solar radiation).
May lead to excess pressure.

10.5. INCOMPATIBLE MATERIALS

Strong acids, strong bases, strong oxidizing agents, and strong reducing agents.

10.6. HAZARDOUS DECOMPOSITION PRODUCTS

Under normal conditions of storage and use, hazardous decomposition products should not be produced

SECTION 11: TOXICOLOGICAL INFORMATION

11.1. INFORMATION ON TOXICOLOGICAL EFFECTS

ACUTE TOXICITY

Product/substance : propan-2-ol
Species : Rat
Route of exposure : Oral
Test : LD50
Result : >5000 mg/kg

Product/substance : propan-2-ol
Species : Rabbit
Route of exposure : Dermal
Test : LD50
Result : >5000 mg/kg

Product/substance : propan-2-ol
Species : Rat
Route of exposure : Inhalation
Test : LC50 (6 hours)
Result : >10000 ppm

Product/substance : acetone;propan-2-one;propanone
Test method : OECD 401
Species : Rat
Route of exposure : Oral
Test : LD50
Result : 5800 mg/kg

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Product/substance : acetone;propan-2-one;propanone
Species : Rat
Route of exposure : Inhalation
Test : LD50
Result : 76 mg/L

Product/substance : acetone;propan-2-one;propanone
Species : Rat
Route of exposure : Inhalation
Test : LD50
Result : 15800 mg/kg

SKIN CORROSION/IRRITATION

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

SERIOUS EYE DAMAGE/IRRITATION

Causes serious eye irritation.

RESPIRATORY SENSITISATION

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

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

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.

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LONG TERM EFFECTS

Irritation effects : This product contains substances, which may cause irritation upon exposure to skin, eyes or lungs. Exposure may result in an increased absorption potential of other hazardous substances at the area of exposure.

Neurotoxic effects: This product contains organic solvents, which may cause adverse effects to the nervous system. Symptoms of neurotoxicity include: loss of appetite, headache, dizziness, ringing in ears, tingling sensations of skin, sensitivity to the cold, cramps, difficulty in concentrating, tiredness, etc. Repeated exposure to solvents can result in the breaking down of the skin's natural fat layer and may result in an increased absorption potential of other hazardous substances at the area of exposure.

OTHER INFORMATION

propan-2-ol has been classified by IARC as a group 3 carcinogen.

SECTION 12: ECOLOGICAL INFORMATION

12.1. TOXICITY

Product/substance	: propan-2-ol
Species	: Fish, <i>Leuciscus idus</i>
Duration	: 48 hours
Test	: LC50
Result	: >100 mg/L

Product/substance	: propan-2-ol
Species	: <i>Daphnia</i> , <i>Daphnia magna</i>
Duration	: 48 hours
Test	: EC50
Result	: >100 mg/L

Product/substance	: propan-2-ol
Species	: Algae, <i>Scenedesmus subspicatus</i>
Duration	: 72 hours
Test	: EC50
Result	: >100 mg/L

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Product/substance : acetone;propan-2-one;propanone
Species : Fish, Oncorhynchus mykiss
Duration : 96 hours
Test : LC50
Result : 5540 mg/L

Product/substance : acetone;propan-2-one;propanone
Species : Fish, Pimephales promelas
Duration : 96 hours
Test : LC50
Result : >100 mg/L

Product/substance : acetone;propan-2-one;propanone
Species : Daphnia, Daphnia magna
Duration : 48 hours
Test : EC50
Result : 8800 mg/L

Product/substance : acetone;propan-2-one;propanone
Species : Bacteria
Compartment : Activated Sludge Plant
Result : 1000 mg/L

Product/substance : acetone;propan-2-one;propanone
Species : Daphnia, Daphnia magna
Duration : 28 days
Test : NOEC
Result : 2.212 mg/L

12.2. PERSISTENCE AND DEGRADABILITY

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

12.3. BIOACCUMULATIVE POTENTIAL

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

12.4. MOBILITY IN SOIL

No data available.

12.5. RESULTS OF PBT AND VPVB ASSESSMENT

This mixture/product does not contain any substances known to fulfil the criteria for PBT and vPvB classification.

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12.6. OTHER ADVERSE EFFECTS

None known.

SECTION 13: DISPOSAL CONSIDERATIONS

RCRA HAZARDOUS WASTE ("P" AND "U" LIST) (40 CFR 261)

acetone;propan-2-one;propanone is listed with EPA Hazardous Waste Number: U002

SPECIFIC LABELLING

CONTAMINATED PACKING

Packaging containing residues of the product must be disposed of similarly to the product.

SECTION 14: TRANSPORT INFORMATION

	UN / ID	UN proper shipping name	Hazard class(es)	PG*	Env**	Other information:
DOT	-	Consumables, Limited Quantity		-	No	See below for additional information.
IMDG	UN1950	Aerosols, 2.1 (Limited Quantity)	Transport hazard class: 2.1	-	No	See below for additional information.
IATA	UN1950	Aerosols, Flammable	Transport hazard class: 2.1	-	No	See below for additional information.

* Packing group

** Environmental hazards

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ADDITIONAL INFORMATION

This product is within scope of the regulations of transport of dangerous goods.

DOT / See - 172.101 Hazardous Materials Table for any information on special provisions, requirements, or warnings in connection with transport. See - 172.602, for instructions in writing regarding mitigation of damages in relation to incidents or accidents during transport.

IMDG / See section 3.2.1, for any information on special provisions, requirements, or warnings in connection with transport.

IATA / See Table 4.2 for any information on special provisions, requirements, or warnings in connection with transport.

14.1. SPECIAL PRECAUTIONS FOR USER

Not applicable.

14.2. 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

15.2. U.S. FEDERAL REGULATIONS

TSCA (the non-confidential portion):

propan-2-ol is listed
Petroleum gases, liquefied, sweetened is listed
acetone;propan-2-one;propanone is listed

Clean Air Act:

EPCRA Section 302

EPCRA Section 304:

EPCRA section 313:

CERCLA:

None of the components are listed

None of the components are listed

propan-2-ol is listed

acetone;propan-2-one;propanone is regulated with a Reportable Quantity (RQ) of: 5000 pounds
This product is subject to Tier II reporting.

Hazardous chemical inventory reporting:

STATE REGULATIONS

California / Prop. 65:

See product label for Prop 65 Statement (if applicable)

Massachusetts / Right To Know Act:

propan-2-ol is listed

acetone;propan-2-one;propanone is listed

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New Jersey / Right To Know Act:

propan-2-ol / Substance number: 1076
propan-2-ol is on the Special Health Hazard Substance List

—
acetone;propan-2-one;propanone / Substance number: 0006
acetone;propan-2-one;propanone is on the Special Health Hazard Substance List

New York / Right To Know Act:

—
propan-2-ol is listed
propan-2-ol is regulated with a Treshold Reporting Quantity (TRQ) of: 0 pounds

—
acetone;propan-2-one;propanone is listed
acetone;propan-2-one;propanone is regulated with a Reportable Quantity (RQ) of: 5000 pounds
acetone;propan-2-one;propanone is regulated with a Treshold Reporting Quantity (TRQ) of: 10 pounds

Pennsylvania / Right To Know Act:

—
propan-2-ol is listed
propan-2-ol is hazardous to the environment (E)

—
acetone;propan-2-one;propanone is listed
acetone;propan-2-one;propanone is hazardous to the environment (E)

—

NFPA

Health hazard: 2

Fire hazard: 4

Instability hazard: 0

15.4. RESTRICTIONS FOR APPLICATION

Restricted to professional users.

Pregnant women and women breastfeeding must not be exposed to this product. The risk, and possible technical precautions or design of the workplace needed to eliminate exposure, must be considered.

15.5. DEMANDS FOR SPECIFIC EDUCATION

No specific requirements.

15.6. ADDITIONAL INFORMATION

Not applicable.

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15.7. CHEMICAL SAFETY ASSESSMENT

No

15.8. SOURCES

OSHA Hazard Communication Standard (29 CFR 1910.1200)

SECTION 16: OTHER INFORMATION**FULL TEXT OF H-PHRASES AS MENTIONED IN SECTION 3**

H220, Extremely flammable gas.

H225, Highly flammable liquid and vapour.

H280, Contains gas under pressure; may explode if heated.

H319, Causes serious eye irritation.

H336, May cause drowsiness or dizziness.

Repeated exposure may cause skin dryness or cracking, Repeated exposure may cause skin dryness or cracking.

Disclaimer

To the best of our knowledge, the information contained herein is accurate. However, neither the above-named supplier nor any of its subsidiaries assumes any liability whatsoever for completeness of the information contained herein. Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.

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