

# MATERIAL SAFETY DATA SHEET

## ZChek - DL

Prepared: May-21 Supersedes: 02

### Section 1: Product and Company Identification

**1.1 Product Name:** ZChek- DL

**1.2 Product Use:** Developer for Dye Penetrant Inspection Process.

**1.3 Manufacturer Information:** ZChem Specialities Private Limited.

Sy. No.11/2/6, Puradapalya Village Tavarekere Hobli, Bangalore,Karnataka-562130, India

**Website:** [www.zchem.in](http://www.zchem.in)

**Emergency Telephone Number:** +91-9959963334

### Section 2: Hazards Identification

#### 2.1 Hazard Classification

This product is hazardous under the criteria of the hazardous product regulation as implemented under WHMIS 2015.

Flammable Liquids: Category 2

Eye irritation: Category 2A

Specific Target Organ Toxicity: Single exposure- Category 3

#### 2.2 Label Elements



#### Hazard pictograms

Signal word: **Danger**

#### 2.3 Hazard Statements

- Highly Flammable liquid and vapors.
- Cause serious eye irritation.
- May cause drowsiness or dizziness.

#### 2.4 Precautionary statement

- Keep away from heat, sparks, open flames, hot surfaces. No smoking.
- Use explosion- proof electrical, ventilating, lighting, equipment.
- If in eyes- rinse cautiously with water for several minutes.
- Wash skin thoroughly after handling.
- Keep container tightly closed.



## 2.5 Classification system

NFPA ratings (scale 0-4)



Health=1  
Fire=3  
Reactivity=0

HMIS -ratings (scale 0-4)

<b>Health -1</b>
<b>Fire -3</b>
<b>Reactivity -0</b>

Health=1  
Fire=3  
Reactivity=0

## 2.6 Other hazards

Results of PBT and vPvB assessment

PBT: Not applicable

vPvB: Not applicable

## Section 3 – Information on Ingredients

Ingredient	CAS#	Wt/wt%
Propan- 2-ol	67-63-0	40-70%
Propan-2-one	67-64-1	10-30%
Talc	14807-96-6	1-3%

## Section 4 –First Aid Measures

**Eyes:** Rinse carefully using plenty of water.

**Skin:** Remove contaminated shoes and clothing. Clean affected area thoroughly with mild soap and water. DO NOT use ointments. Seek medical attention if irritation persists.

**Inhalation:** Immediately move victim to fresh air. If victim is not breathing, immediately begin rescue breathing. If heart has stopped, immediately begin cardiopulmonary resuscitation (CPR). If breathing is difficult, seek medical attention immediately.

**Ingestion:** DO NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. If spontaneous vomiting is about to occur, place victim's head below knees. If victim is drowsy or unconscious, place on the left side with head down. DO NOT leave victim unattended. Seek medical attention immediately.



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## Section 5: Fire Fighting Measures

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### 5.1 Extinguishing media

**Suitable extinguisher agents:**

- CO<sub>2</sub>, sand, extinguishing powder. Do not use water.
- Water haze
- Foam
- ABC Powder

**For safety reasons unsuitable extinguishing agents:** Water with full jet.

### 5.2 Advice for fire fighters

**Protective equipment:**

Wear self-contained respiratory protective device.

Wear fully protective suit.

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## Section 6: Accidental Release Measures

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### 6.1 Personal precautions, protective equipment and emergency procedures

Wear protective equipment. Keep unprotected persons away.

Ensure adequate ventilation.

**6.2 Environmental precautions:** Do not allow to enter sewers, surfaces or ground water.

### 6.3 Methods and material for containment and cleaning up:

- Absorb with liquid-binding material(sand, diatomite, acid binders, universal binders, sawdust).
- Ensure adequate ventilation.
- Do not flush with water or aqueous cleansing agents.
- Collect liquid in an appropriate containers or absorb with an inert materials such as vermiculite, dry sand or earth; DO NOT use combustible materials.
- Place in a chemical waste container.

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## Section 7: Handling and Storage

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### 7.1 Prevention for safe handling:

- DO NOT allow material to come in contact with eyes or skin. Wear appropriate protective equipment during handling. Keep container closed. Avoid breathing vapors or mists. Use only with adequate ventilation. Wash thoroughly after handling.
- Protect against electrostatic charges.
- Use explosion-proof apparatus/fittings and spark-proof tools.
- Containers may be hazardous when empty since residue liquid and vapours may be present.

### 7.2 Conditions for safe Storage:

- No smoking.
- Store in cool, dry conditions in well sealed receptacles.



## Section 8: Exposure Controls and Personal Protection

### 8.1 Control Parameters

Propan- 2-ol (67-63-0)		
ACGIH	ACGIH TWA (ppm)	200 ppm
ACGIH	ACGIH STEL (ppm)	400 ppm
OSHA	OSHA PEL (TWA) mg/m <sup>3</sup>	980 mg/m <sup>3</sup>
OSHA	OSHA PEL (TWA) (ppm)	400 ppm
USA-IDLH	US IDLH (ppm)	2000 ppm(10% LEL)
USA -NIOSH	NIOSH REL (TWA) (mg/m <sup>3</sup> )	980 mg/m <sup>3</sup>
USA -NIOSH	NIOSH REL (TWA) (ppm)	400 ppm
USA- NIOSH	NIOSH REL (STEL) (mg/m <sup>3</sup> )	1225 mg/m <sup>3</sup>
USA -NIOSH	NIOSH REL (STEL) (ppm)	500 ppm
Propan-2-one (67-64-1)		
ACGIH	ACGIH TWA (mg/m <sup>3</sup> )	1188 mg/m <sup>3</sup> /8h
ACGIH	ACGIH TWA (ppm)	500 ppm/8h
ACGIH	ACGIH STEL (mg/m <sup>3</sup> )	1782 mg/m <sup>3</sup> /15min
ACGIH	ACHIH STEL (ppm)	750 ppm/15min
OSHA	OSHA PEL (TWA) mg/m <sup>3</sup>	2400 mg/m <sup>3</sup>
OSHA	OSHA PEL (TWA) (ppm)	1000 ppm
USA-IDLH	US IDLH (ppm)	2500 ppm(10% LEL)
USA -NIOSH	NIOSH REL (TWA) (mg/m <sup>3</sup> )	590 mg/m <sup>3</sup> /10h
USA -NIOSH	NIOSH REL (TWA) (ppm)	250 ppm/10h

### 8.2. Exposure Controls

**Engineering Controls:** Provide general and/or local exhaust ventilation to keep exposures below the exposure guidelines mentioned above.

**Personal protection:** Wear safety glasses to protect eyes. Wear nitrile rubber gloves if hand exposure is unavoidable. Respirator with filter if sprayed in enclosed unventilated space.



**General Hygiene Considerations:** Wash thoroughly after handling. Have eye-wash facilities immediately available.

## Section 9: Physical and Chemical Properties

Appearance:  
Form: White liquid  
Color: White





## ZChem Specialities Pvt. Ltd.

Global Pioneer in NDT  
Consumables & Equipment



Odor: Characteristic  
Odor threshold: Not determined.  
pH value: Not applicable  
Melting point: Not determined.  
Boiling point: Min 55 deg.C  
Flammability - Not applicable  
Flash point: - 20 deg.C  
Ignition temperature: No data available  
Decomposition temperature: Not determined.  
Auto-ignition temperature- Product is not self-igniting.  
Explosions limits: Isopropyl alcohol portion:  
Lower: 2.0 Vol%  
Upper: 13.0 Vol%  
Vapour pressure at 20 deg.C: Not determined  
Evaporation rate: Not determined  
Solubility /miscibility with water: Not miscible or difficult to mix  
Partition Coefficient: Not determined  
Viscosity:  
Dynamic- Not determined  
Viscosity- Not determined  
VOC Content: 85%  
Vapor density: 3  
Evaporation rate: 0.4 of ether

### Section 10: Stability and Reactivity

**Stability:** Stable.

**Conditions to Avoid:** Keep away from heat and ignition sources.

**Incompatibility:** None

**Hazardous Decomposition:** When burning, soot, oxides of carbon and nitrogen.

**Reactivity:** None

### Section 11: Toxicological Information

Propan- 2-ol (67-63-0)	
LD 50 oral rat	5840 mg/kg
LD 50 dermal rabbit	>12800 mg/kg
LC 50 inhalation rat	>10000 ppm/6h
Propan-2-one (67-64-1)	
LD 50 oral rat	5800 mg/kg
LC 50 inhalation rat	76 mg/l/4h(female)
LC 50 inhalation rat	132 mg/l/3h (Male)



Sy.No. 11/2/6, Puradapalya Village  
Tavarekere Hobli, Bangalore,  
Karnataka - 562130, India

☎ | +91 73491 77755, +91 73492 77755

✉ | info@zchem.in



www.zchem.in



**Primary irritant effect**

- Skin: No irritant effect.
- Eye: Irritating effect
- Sensitization: No sensitizing effects known

**Carcinogenic categories**

<b>IARC(International Agency for Research of Cancer)</b> -67-63-0 Propan-2-ol – 3
<b>NTP (National Toxicology Program)</b> – None of the ingredients listed
<b>OSHA-Ca (Occupational Safety and Health Administration)</b> -None of the ingredients is listed

**Section 12: Ecological Information**

- 12.1.Ecology:** General: May cause long term adverse effect in the aquatic environment.  
**12.2. Persistence and degradability:** No further relevant information available.  
**12.3. Bio accumulative potential:** No further relevant information available  
**12.4. Mobility in soil:** No further information available.  
 Water hazard class1(self- assessment): slightly hazardous for water.

**Section 13: Disposal Considerations**

**13.1. Waste treatments methods**

Recommendation:

- Must not be disposed of together with household garbage. Do not allow product to reach sewage system.
- Waste/unused products
- Collect all waste in suitable and labeled containers and dispose according to local legislation.

**13.2. Un-cleaned packaging's:**

Recommendation:


Waste/used products


Waste products and empty packages dispose of in accordance with local regulations.  
 Empty containers may contain flammable residues.

**Section 14: Transport Information**

<b>14.1 UN -Number</b> DOT, ADR,IMDG,IATA	UN 1993
<b>14.2 UN proper shipping name</b> <ul style="list-style-type: none"> <li>• DOT -</li> <li>• ADR-</li> <li>• IMDG-</li> <li>• IATA-</li> </ul>	Flammable liquid n.o.s. (Isopropanol) Flammable liquid n.o.s. (Isopropanol) Flammable liquid n.o.s. (Isopropanol) Flammable liquid n.o.s. (Isopropanol)



<p><b>14.3 Transport Hazard class(es)</b></p> <p>DOT</p> 	<p>Class 3 Flammable liquid</p> <p>Label-3</p>
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<p>ADR, IMDG, IATA</p> 	<p>Class 3 Flammable liquid</p> <p>Label-3</p>
<p><b>14.4 Packing group</b> DOT, ADR, IMDG, IATA</p>	<p>II</p>
<p><b>14.5 Environmental hazards</b> Marine pollutant</p>	<p>No</p>
<p><b>14.6 Special precautions for user</b> Danger code(Kemler): EMS Number:</p>	<p>Warning: Flammable liquids 33 F-E,-S-D</p>
<p><b>14.7 Transport in bulk according to Annex II of Marpol 73/78 and the IBC Code</b></p>	<p>Not applicable</p>
<p><b>Transport/ Additional information:</b> DOT Quantity limitations On passenger aircraft/ railway :- 5 ltr On cargo aircraft only:- 60 ltr</p>	
<p>ADR Excepted quantities (EQ)      Code: E2 Maximum net quantity per inner packaging- 30 ml Maximum net quantity per outer packaging -500 ml</p>	
<p>IMDG Limited quantities (LQ)      1 L</p>	



IATA	
Remarks :	Quantity Limitation- Passenger Air craft- 5ltr Quantity Limitation- Cargo Aircraft 60 ltr Quantity limitation -Limited quantities- 1ltr Packaging Instruction: Passenger Aircraft- PI 353 Cargo aircraft-PI 364 Limited quantities -PI Y341
UN "Model Regulation"	UN 1993 Flammable liquid n.o.s (Isopropyl alcohol),,3,II

## Section 15: Regulatory Information

### 15.1 Safety, Health and Environmental Regulations/ Legislation specific for the substance or mixture.

- **SARA:-** Section 355 (extremely hazardous substances): None of the ingredient is listed
- **Section 313** (Specific toxic chemical listings); 67-63-0 propan-2-ol
- **TSCA (Toxic Substance Control Act):-** All components listed
- **Proposition 65**
- **Chemicals Known to cause cancer:** None of the ingredients is listed.
- **Chemicals known to cause reproductive toxicity for females:** None of the ingredients is listed.
- **Chemicals known to cause reproductive toxicity for males:** None of the ingredients is listed.
- **Chemicals known to cause developmental toxicity:** None of the ingredients is listed.
- **Carcinogenicity Categories**
- **EPA (Environmental Protecting Agency)** -None of the ingredients listed.
- **TLV(Threshold Limit Value established by ACGIH)**-67-63-0 propan-2-ol
- **NIOSH (National Institute For Occupational Safety And Health)**-None of the ingredients is listed.

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

Note: This MSDS has been prepared to meet WHMIS (Canada) requirements with the expectation of using 16 headings.

## Section 16: Other Information

**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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