

## MATERIAL SAFETY DATA SHEET

### ZChek – DD9

Prepared according to the Hazard Communication Standard (CFR 29 1910.1200) HazCom 2012 and the Hazardous Products Regulations (HPR) WHMIS 2015  
Prepared: OCT-22 Supersedes: 04

#### Section 1: Product and Company Identification

**1.1 Product Name:** ZChek- DD9 Dry Developer

**1.2 Product Use:** Non-Destructive Testing-Type 1, Form a

**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

Not a hazardous substance or mixture

##### 2.2 Label Elements

**Hazard pictograms** None

**Signal word** None

##### 2.3 Hazard Statements

- Not a hazardous substance or mixture.

##### 2.4 Precautionary statements

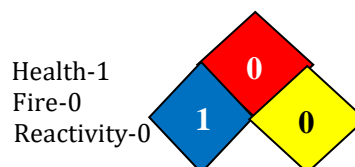
- P305+P351+P338 If in eyes- rinse cautiously with water for several minutes.
- P264 Wash skin thoroughly after handling.
- P332+P313 If skin irritation occurs. Get medical advice/attention.
- P304+P340+P314 If inhaled: Move to fresh air. Get medical advice/attention if irritation develops and persists
- P301+P330+P314 If swallowed: Immediately call a doctor. Do not induce vomiting.

##### 2.5 Classification system

HMIS- ratings (scale 0-4)

Health -1
Fire -0
Reactivity -0

NFPA-ratings (scale 0-4)



## 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%
Penta erythritol	115-77-5	50-60%
Hexamethyldisilazane,Silica reaction product	68909-20-6	5-8 %
Aluminum oxide	1344-28-1	8-14%

## 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.

## Section 5: Fire Fighting Measures

### 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 spray

**5.2 Special hazards arising from the substance or mixture** During fire, gases hazardous to health may be formed

**5.3 Advice for fire fighters:** No unusual fire or explosion hazards noted.

**Protective equipment:**

Wear self-contained respiratory protective device.

Wear fully protective suit.



## Section 6: Accidental Release Measures

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

Wear protective equipment. Keep unprotected persons away.

Ensure adequate ventilation. Use a NIOSH/MSHA approved respirator if there is a risk of exposure to dust/fume at levels exceeding the exposure limits.

**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.
- Place in a chemical waste container.

## Section 7: Handling and Storage

### 7.1 Prevention for safe handling:

Keep formation of airborne dusts to a minimum. Minimize dust generation and accumulation.

Provide appropriate exhaust ventilation at places where dust is formed. Avoid prolonged exposure. Practice good housekeeping.

### Information about protection against explosions and fires:

- Use explosion-proof apparatus/fittings and spark-proof tools

### 7.2 Conditions for safe Storage:

- No smoking.
- Store in original tightly closed container. Store in a well-ventilated place. Store away from incompatible material like acetaldehyde, acids, chlorine, ethylene oxide and strong oxidizing agents

## Section 8: Exposure Controls and Personal Protection

### 8.1 Control Parameters

Pentaerythritol (115-77-5)		
ACGIH	ACGIH TWA (mg/m <sup>3</sup> )	10 mg/m <sup>3</sup>
OSHA	OSHA PEL (TWA) (mg/m <sup>3</sup> )	15 mg/m <sup>3</sup> (total dust) 5 mg/m <sup>3</sup> (respirable fraction)
USA- NIOSH	NIOSH REL (TWA) (mg/m <sup>3</sup> )	10mg/m <sup>3</sup> (total dust) 5mg/m <sup>3</sup> (respirable dust)
Aluminum oxide (1344-28-1)		
ACGIH	Not applicable	15mg/m <sup>3</sup> (total dust)
OSHA	OSHA PEL (TWA) (mg/m <sup>3</sup> )	5mg/m <sup>3</sup> (respirable fraction)

### 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.



**Breathing equipment:** In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use respiratory protective device that is independent of circulating air

Ventilation System: A system of local or general exhaust is recommended to keep employee exposure below the airborne exposure limits.

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

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## Section 9: Physical and Chemical Properties

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Appearance:

Form : Solid

Color: Bright white powder

Odor: Odorless

Odor threshold: Not determined

pH value: Not applicable

Melting point: Not determined

Boiling point: Not determined

Flammability (solid, gaseous)- Not applicable

Ignition temperature: No data available

Decomposition temperature: Not determined

Auto-ignition temperature- Product is not self igniting

Danger of explosions: No data available

Explosions limits: No data available

Density @ 20 deg.C (68° F) : Not determined

Vapour pressure at 20 deg.C: Not determined

Evaporation rate: Not determined

Solubility /miscibility with water: No data available

Partition Coefficient: Not determined

Viscosity:

Dynamic- Not determined

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## Section 10: Stability and Reactivity

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**Stability:** Stable and non-reactive under normal conditions for use, storage and transport.

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

**Incompatibility:** Avoid contact with acetaldehyde, acids, chlorine, ethylene oxide, isocyanate and strong oxidizing agents.

**Hazardous Decomposition:** No dangerous decomposition products known.

**Reactivity:** None.

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## Section 11: Toxicological Information

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**Information on toxicological effects**

**Acute toxicity:** Information on hazardous ingredients

**Primary irritant effect**

- Skin: May irritant the skin and mucous membranes.
- Eye: May irritate the eye
- Sensitization: No sensitizing effects known.



**Carcinogenic categories**

<ul style="list-style-type: none"> <li>• <b>IARC(International Agency for Research of Cancer)</b>- No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen.</li> </ul>
<ul style="list-style-type: none"> <li>• <b>ACGIH(American Conference of Governmental Industrial Hygienists)</b>- No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen.</li> </ul>
<ul style="list-style-type: none"> <li>• <b>NTP (National Toxicology Program)</b> – No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen.</li> </ul>
<ul style="list-style-type: none"> <li>• <b>OSHA-Ca (Occupational Safety and Health Administration)</b>- No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen.</li> </ul>

**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.

**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 residue.

**Section 14: Transport Information**

<b>14.1 UN -Number</b>	
DOT, ADR,IMDG,IATA	Not regulated as dangerous goods.
<b>14.2 UN proper shipping name</b>	
<ul style="list-style-type: none"> <li>• DOT -</li> <li>• ADR, IMDG,IATA</li> </ul>	Not regulated as dangerous goods.



<b>14.3 Transport Hazard class(es)</b> DOT ,ADR,IMDG,IATA	Not applicable
<b>14.4 Packing group</b> DOT,ADR,IMDG,IATA	Not applicable
<b>14.5 Environmental hazards</b> Marine pollutant	No
<b>14.6 Special precautions for user</b>	None

## Section 15: Regulatory Information

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

- **SARA:** - Section 302 (extremely hazardous substances): None of the ingredients is listed.
- **Section 313**(Specific toxic chemical listings): None of the ingredients is listed.
- **Section 311/312** No SARA Hazards
- **TSCA (Toxic Substance Control Act):-** Materials on inventory
- **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 is listed.
- **TLV (Threshold Limit Value established by ACGIH)-** None of the ingredients is listed.
- **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 2015 (Canada) requirements.

## 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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