Material Safety Data Sheet

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

ZChek-CR Aerosol

Section 1: Product and Company identification

1.1 Product Name: ZChek- CR 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 STATUS

This 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.
Asp. Tox. 1; H304, May be fatal if swallowed and enters airways.
Skin Irrit. 2; H315, Causes skin irritation.
STOT SE 3; H336, May cause drowsiness or dizziness.

2.2 Label Elements

Hazardous symbol



Signal word	:	Danger
Hazard statement(s)	:	Extremely flammable aerosol. Pressurised container: May burst if heated. (H222, H229) May be fatal if swallowed and enters airways. (H304) Causes skin irritation. (H315) 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) Wash hands and exposed skin thoroughly after handling. (P264) Wear eye protection/protective gloves/protective clothing. (P280)
Response	:	IF SWALLOWED: Immediately call a POISON CENTER/doctor. (P301+P310) Call a POISON CENTER/doctor if you feel unwell. (P312) Do NOT induce vomiting. (P331))
Storage	:	Store in a well-ventilated place. Keep container tightly closed. (P403+P233) Protect from sunlight. Do no 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.

Section 3: Information and Ingredients

3.1. SUBSTANCES

Not applicable. This product is a mixture.

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	

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 : Remove contaminated clothing and shoes immediately. Ensure to wash exposed skin thoroughly with water and soap. Skin cleanser can be used. DO NOT use solvents or thinners. If skin irritation occurs: Get medical advice/attention.

Eye contact : If in eyes: Flush eyes with water or saline water (20-30 °C) for at least 5 minutes. Remove contact lenses. Seek medical assistance and continue flushing during transport.

Ingestion	:	IF SWALLOWED: Immediately call a POISON CENTER/doctor. Do not induce vomiting! If vomiting occurs, keep head facing down so that vomit does not get into the lungs. Call a doctor or ambulance. Symptoms of chemical pneumonia can appear after several hours. People who have swallowed the product should therefore be kept under medical attention for at least 48 hours.
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

This product contains substances that can cause chemical pneumonia if swallowed. Symptoms of chemical pneumonia may appear after several hours.

4.3 INDICATION OF ANY IMMEDIATE MEDICAL ATTENTION AND SPECIAL TREATMENT NEEDED

IF exposed or concerned: 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. Pressurized 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.

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.
Avoid direct contact with the product.
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

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	:	< 50°C
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

Naphtha (petroleum), hydrotreated light
Short term exposure limit (STEL) (ACGIH TLV) (ppm): 1000
Long term exposure limit (OSHA Table Z-1) (ppm): 1000
Long term exposure limit (ACGIH TLV) (ppm): 241

Petroleum gases, liquefied, sweetened
Long term exposure limit (OSHA Table Z-1) (ppm): 1000

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	:	Take off contaminated clothing and wash it before reuse.
Measures to avoid environmental exposure	:	Keep damming materials near the workplace. If possible, collect spillage during work.

INDIVIDUAL PROTECTION MEASURES, SUCH AS PERSONAL PROTECTIVE EQUIPMENT

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

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.				

Skin protection :

Material	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	:	Colorless
Odor	:	Mild Odor
Odor threshold (ppm)	:	No data available
pH	:	No data available
Density (g/cm^3)	:	No data available
Relative density	:	No data available
Kinematic viscosity	:	No data available
Particle characteristics	:	Not applicable - product is an aerosol

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 relevant or available data due to the nature of the product.
n-octanol/water coefficient (LogKow)	:	No data available
Solubility in fat (g/L)	:	No relevant or available data due to the nature of the product.

9.2. OTHER INFORMATION

Evaporation rate (n butylacetate = 100)	:	No data available
VOC (g/L)	:	711.94
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.

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	:	ZChek- CR Aerosol
Test method	:	OECD 401
Species	:	Rat
Route of exposure	:	Oral
Test	:	LD50
Result	:	5.840 mg/kg

Product/substance	:	ZChek- CR Aerosol
Species	:	Rat-male & female
Route of exposure	:	Inhalation
Test	:	LC50
Duration	:	4 hours
Result	:	37,5 mg/l - vapour

Product/substance	:	ZChek- CR Aerosol
Test method	:	OECD 403
Species	:	Rabbit
Route of exposure	:	Dermal
Test	:	LC50
Result	:	12.800 mg/kg
Remarks	:	(RTECS)

SKIN CORROSION/IRRITATION

Product/substance	:	ZChek- CR Aerosol
Test method	:	OECD 404
Skin	:	Rabbit
Duration	:	4 hours
Result	:	No skin irritation

SERIOUS EYE DAMAGE/IRRITATION

Product/substance	:	ZChek- CR Aerosol
Test method	:	OECD 405
Eyes	:	Rabbit
Result	:	Eye irritation
Remarks	:	(Regulation (EC) No 1272/2008, Annex VI)

RESPIRATORY SENSITISATION

Product/substance	:	ZChek- CR Aerosol
Test method	:	OECD 405
Species	:	Guinea pig
Test	:	Buehler
Result	:	negative

SKIN SENSITISATION

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

GERM CELL MUTAGENICITY

Test Type	:	Ames test
Test system	:	Salmonella typhimurium
Metabolic activation	:	with and without metabolic activation
Test method	:	OECD 471
Result	:	negative
Test Type	:	In vitro mammalian cell gene mutation test
Test system	:	Chinese hamster ovary cells
Metabolic activation	:	with and without metabolic activation
Method	:	OECD 476
Result	:	negative

Test Type	:	In vivo micronucleus test
Species	:	Mouse
Cell type	:	Bone marrow
Application Route	:	Intraperitoneal injection
Method	:	OECD 474
Result	:	negative

CARCINOGENICITY

This product is or contains a component that is not classifiable as to its carcinogenicity based on its IARC, ACGIH, NTP, or EPA classification.

REPRODUCTIVE TOXICITY

No data available

SPECIFIC TARGET ORGAN TOXICITY - SINGLE EXPOSURE

Inhalation, Oral - May cause drowsiness or dizziness. - Central nervous system
Remarks: Classified according to Regulation (EU) 1272/2008, Annex VI (Table 3.1/3.2)

SPECIFIC TARGET ORGAN TOXICITY - REPEATED EXPOSURE

No data available

ASPIRATION HAZARD

No data available

SECTION 12: ECOLOGICAL INFORMATION

12.1. TOXICITY

Toxicity to fish	:	flow-through test LC50 - Pimephales promelas (fathead minnow) - 9.640 mg/l - 96 h (OECD Test Guideline 203)
Toxicity to daphnia and other aquatic invertebrates	:	EC50 - Daphnia magna (Water flea) - 13.299 mg/l - 48 h Remarks: (IUCLID)
Toxicity to algae	:	IC50 - Desmodesmus subspicatus (green algae) - > 1.000 mg/l - 72 h Remarks: (IUCLID)
Toxicity to bacteria	:	EC5 - Pseudomonas putida - 1.050 mg/l - 16 h Remarks: (Lit.)

12.2. PERSISTENCE AND DEGRADABILITY

Biodegradability	:	aerobic - Exposure time 5 d Result: 53 % - Readily biodegradable. (Directive 67/548/EEC, Annex V, C.6)
Theoretical oxygen demand	:	2.400 mg/g Remarks: (Lit.)
Ratio BOD/ThBOD	:	49 % Remarks: (IUCLID)

12.3. BIOACCUMULATIVE POTENTIAL

No bioaccumulation is to be expected (log Pow <= 4).

12.4. MOBILITY IN SOIL

No data available.

12.5. RESULTS OF PBT AND VPVB ASSESSMENT

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

12.6. OTHER ADVERSE EFFECTS

No data available

SECTION 13: DISPOSAL CONSIDERATIONS

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

None of the components are listed

SPECIFIC LABELLING

CONTAMINATED PACKING

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

SECTION 14: TRANSPORT INFORMATION

	14.1 UN / ID	14.2 UN proper shipping name	14.3 Hazard class(es)	14.4 PG*	14.5 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

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.

14.6. SPECIAL PRECAUTIONS FOR USER

Not applicable.

14.7. 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):	Naphtha (petroleum), hydrotreated light is listed Petroleum gases, liquefied, sweetened is listed
Clean Air Act:	None of the components are listed
EPCRA Section 302	None of the components are listed
EPCRA Section 304:	None of the components are listed
EPCRA section 313:	None of the components are listed
CERCLA:	None of the components are listed
Hazardous chemical inventory reporting:	This product is subject to Tier II reporting.

STATE REGULATIONS

California / Prop. 65:	See product label for Prop 65 Statement (if applicable)
Massachusetts / Right To Know Act:	None of the components are listed
New Jersey / Right To Know Act:	None of the components are listed
New York / Right To Know Act:	None of the components are listed
Pennsylvania / Right To Know Act:	None of the components are listed

NFPA

Health hazard: 2
Fire hazard: 4
Instability hazard: 0

15.4. RESTRICTIONS FOR APPLICATION

Restricted to professional users.

15.5. DEMANDS FOR SPECIFIC EDUCATION
No specific requirements.

15.6. ADDITIONAL INFORMATION
Not applicable.

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.
H304, May be fatal if swallowed and enters airways.
H315, Causes skin irritation.
H336, May cause drowsiness or dizziness.

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.

ZCUS/007, Issued on: 01-07-2026