

**Consolidated Oil Well Services, Inc.**  
**P.O. Box 884**  
**Chanute, KS 66720**

**MATERIAL SAFETY DATA SHEET**

**1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION**

Product Identifier : IKC-50  
Chemical Name : Not Applicable, A Blend  
Chemical Family : Organic Acid  
Manufacturer : CESI Chemical (a Flotek Industries, Inc. company)  
: 1004 S. Plainsman Road, Marlow, OK 73055  
Emergency Phone : (405) 282-8510  
Prepared by : Denise Patterson  
Phone : (580) 658-6608  
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Revised Date :

**2. COMPOSITION/INFORMATION ON INGREDIENTS**

Ingredient : Citric Acid  
CAS No. : 77-92-9  
Wt. Percent Range : 35-50  
OSHA PEL : 5 mg/m<sup>3</sup> (respirable dust)  
ACGIH TLV : 5 mg/m<sup>3</sup> (respirable dust)  
LD50 : No data available  
LC50 : No data available

**3. HAZARDS IDENTIFICATION**

Human health hazards  
Acute health hazards : Irritant  
Chronic health hazards : None known  
Route(s) of entry : Eyes and skin  
Safety hazards : None known  
Environmental hazards : No information is available on this product.

**4. FIRST AID MEASURES**

Eye : Remove contact lenses at once. Immediately flush with copious amounts of water for at least 15 minutes while holding eyelids open. If irritation persists, seek medical attention.  
Skin : Wash affected area thoroughly with soap and water for at least 15 minutes or until product is removed. Remove contaminated clothing and launder before reuse. If irritation develops, seek medical attention.  
Inhalation : Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Seek prompt medical attention.  
Ingestion : Call a physician or poison control center immediately. Only induce vomiting at the instruction of medical personnel. Never give anything by mouth to an unconscious person.

**5. FIRE FIGHTING MEASURES**

Flash Point :  
Lower Explosion Limit : Not applicable  
Upper Explosion limit : Not applicable  
Extinguishing Media : Use extinguishing media appropriate for surrounding fire.  
Protective equipment : NIOSH/MSHA approved self-contained breathing apparatus (SCBA) and turnout gear.  
Hazardous combustion products : Oxides of carbon

## 6. ACCIDENTAL RELEASE MEASURES

- Personal precautions : Wear hand, eye, protective clothing and respiratory protective equipment to eliminate contact.
- General precautions : Eliminate ignition sources. Evacuate all non-essential personnel.
- Small spills : Soak up residue with an inert absorbent and place into appropriate containers for disposal or reclamation. Flush contaminated area thoroughly with water. Retain washings as contaminated waste.
- Large spills : If possible stop the flow of chemical. Dike to contain and prevent spreading. Remove with vacuum truck or pump to salvage vessels. Treat residue as for small spills.

## 7. HANDLING AND STORAGE

- Handling : Avoid contact with eyes, skin and clothing. Avoid breathing vapors. Use with adequate ventilation. Do not take internally. Wear appropriate protective clothing and equipment during handling. Wash thoroughly after handling. Remove contaminated clothing and laundry before reuse.
- Storage : Keep container closed when not in use. Store drums with the bung up. Carefully vent container before removing bung.

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

- Occupational exposure standards : Not established for the product.
- Hand protection : Nitrile rubber gloves.
- Eye protection : Chemical splash goggles and face shield if conditions warrant.
- Respiratory protection : Not normally required.
- Engineering control measures : General (mechanical) room ventilation is expected to be satisfactory.
- Other : Emergency eye wash fountains and safety showers should be in the immediate vicinity of any potential exposure.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

- Form : Liquid
- Appearance : Clear
- Color : Colorless
- Odor : Odorless
- Specific Gravity : 1.1923
- Bulk Density : 9.95 lbs/gal
- Boiling Point : No data available
- Freezing Point : 16<sup>o</sup> F (-8.89<sup>o</sup>C)
- Solubility in water : Complete
- pH : 1-3
- Percent Volatiles : Not applicable
- Vapor Pressure : No data available

## 10. STABILITY AND REACTIVITY

- Stability : Stable
- Conditions to avoid : None known
- Hazardous polymerization : Will not occur
- Hazardous decomposition products : Oxides of carbon
- Incompatibility : Reaction with caustic can create heat (strong exotherm); mildly corrosive to carbon steel.

## 11. TOXICOLOGICAL INFORMATION

- Acute Effects
- Eye : Causes irritation to the eyes, resulting in stinging, reddening, tearing and swelling.
- Skin : May cause mild to moderate irritation to the skin, resulting in reddening, stinging and swelling.
- Inhalation : May cause nose, throat and general upper respiratory tract irritation.
- Ingestion : No hazard expected by this route in normal use.
- Chronic Effects : No known chronic effects.
- Carcinogenicity : None of the ingredients are listed in NTP, IARC monographs or OSHA regulated.

**12. ECOLOGICAL INFORMATION**

Environmental Fate : Product is expected to be readily biodegradable.

**13. DISPOSAL CONSIDERATIONS**

Waste disposal : Recycle if possible. Otherwise dispose to licensed disposal contractor.  
Product disposal : Recycle if possible. Otherwise comply with all local, state and federal regulations.  
Container disposal : Drain container thoroughly. Triple rinse with water. Send to reclaimer or dispose of properly. Comply with all local, state and federal regulations.

**14. TRANSPORT INFORMATION**

**LAND (D.O.T.)**

Shipping Name : UN1760, Corrosive liquids, n.o.s., (contains Citric Acid), 8, PGII  
Label(s) required : Corrosive  
Emergency Phone : (405) 282-8510

**AIR (IATA)**

Shipping Name : UN1760, Corrosive liquids, n.o.s., (contains Citric Acid), 8, PGII  
Label(s) required : Corrosive

**SEA (IMDG)**

Shipping Name : UN1760, Corrosive liquids, n.o.s., (contains Citric Acid), 8, PGII  
Label(s) required : Corrosive

**15. REGULATORY INFORMATION**

OSHA Classification : This document has been prepared in accordance with the MSDS requirements of the OSHA Hazard Communication Standard 29 CFR 1910.1200.  
Corrosive

OSHA Classification : Corrosive

TSCA (USA) : All components listed.

DSL (Canada) : All components listed.

**SARA Title III**

Section 302 : Extremely Hazardous Substances (40CFR355): This product does not contain ingredients listed in Appendix A and B.

**Sections 311/312**

Immediate (acute) health hazard : YES

Delayed (chronic) health hazard : NO

Fire hazard : NO

Sudden Release of Pressure Hazard : NO

Reactive Hazard : NO

Section 313 Reportable Quantities : None

**CERCLA**

If the reportable quantity of this product is accidentally spilled, the incident is subject to the provisions of the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) and must be reported to the National Response Center by calling (800) 424-8802.

Reportable Quantity : Not determined for the product.

**16. OTHER INFORMATION**

NFPA 704

Health : 1  
Fire : 1  
Reactivity : 0  
Special : None

HMIS

Health : 1  
Fire : 1  
Reactivity : 0  
Special : None

Disclaimer of Liability : The information contained in this MSDS was obtained from sources that we believe are reliable. However, the information is without any warranty, express or implied, regarding correctness. The methods of handling, storage, use and disposal of the product are beyond our control and may be outside the scope of our knowledge. For these reasons, we do not assume responsibility and expressly disclaim liability for loss, damage or expense arising out of or in any way connected with the handling, storage, use or disposal of the product.