TRICAN MATERIAL SAFETY DATA SHEET

SECTION 1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product Name	**FEAC-20**	**Code**	
Supplier	Trican Well Service 1517 Center Place Drive Denton, Texas, 76205 For Product Information/MSDS Call: (940) 243-1120 (8:00 AM – 5:00 PM CST, Monday – Friday)	**Revision Date**	
Product Uses	Iron control additive	**Supersedes Date**	
24 Hour Emergency Number	CHEMTREC 1-800-424-9300	**Original Creation**	October 21, 2010

SECTION 2. HAZARDS IDENTIFICATION

Hazard Summary	WARNING! CORROSIVE. Causes severe burns to eyes, skin and respiratory tract. Harmful by all routes of exposure. Avoid breathing vapours or mists. In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. Immediately remove all contaminated clothing and flush thoroughly with plenty of water. Wear suitable protective clothing, gloves and eye/face protection. Provide safety shower and eyewash in immediate work area.
OSHA Regulatory Status	This product is considered hazardous under OSHA Hazard Communication Standard 29CFR 1910.1200.
Routes of Exposure	Eyes, skin, inhalation and ingestion.
Potential Acute Health Effects	
Eyes Contact	Causes severe eye burns. May cause permanent eye damage. Symptoms of exposure may include: eye irritation, burning sensation, pain, watering and/or change of vision.
Skin Contact/Absorption	Harmful if absorbed through the skin. Causes burns. Symptoms of exposure may include: Redness or discoloration, swelling, itching, burning or blistering of skin. Prolonged or repeated contact may cause skin sensitization.
Inhalation	Symptoms of exposure may include; nasal discharge, hoarseness, coughing, chest pain and breathing difficulty. Accumulation of fluid in the lungs (pulmonary edema) may occur.
Ingestion	Causes digestive tract burns. Symptoms of exposure may include: Inflammation of mouth, throat, esophagus and/or stomach. Nausea, vomiting, loss of appetite, gastrointestinal irritation and/ or diarrhea.
Medical Conditions Aggravated by Exposure	Not available
See also Toxicological Information (Section 11)	
Additional Remarks	None

SECTION 3. COMPOSITION AND INFORMATION ON INGREDIENTS

Name	CAS #	% (wt)
Acetic acid	64-19-7	40-50
Citric acid	77-92-9	25-30

SECTION 4. FIRST AID MEASURES

Eye Contact	Immediately flush eyes with plenty of water for at least 15 minutes while holding eyelids open. Seek medical attention immediately after flushing.
Skin Contact	Flush with water for at least 15 minutes. For large splash, flood body under a shower. Remove contaminated clothing immediately and launder before reuse. Remove contaminated shoes and discard. Seek immediate medical attention.
Inhalation	Remove person to fresh air. If not breathing, provide artificial respiration. WARNING: IT MAY BE DANGEROUS TO THE PERSON PROVIDING AID

	TO GIVE MOUTH-TO-MOUTH RESUSCITATION WHEN THE INHALED MATERIAL IS TOXIC, INFECTIOUS OR CORROSIVE. Fluid may accumulate in the lungs even hours after exposure. Seek immediate medical attention.
Ingestion	Do NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. If vomiting occurs spontaneously, keep head below hips to prevent aspiration of material into lungs. Seek medical attention immediately.
Notes to Physician	Treat symptomatically. Observe for pulmonary edema. Effects may be delayed a few hours.
Additional Remarks	None

SECTION 5. FIRE FIGHTING MEASURES

Conditions of Flammability	Not considered combustible but may ignite if heated above flashpoint.
Extinguishing Media	Small fire: Use dry chemical, CO2, water spray or alcohol foam. Large fire: Use water spray, fog or foam. Do not use water jet as it may scatter material and spread the fire. Water spray may be used to cool containers exposed to fire conditions.
Protection of Firefighters	As in any fire, wear full fire fighting gear including NIOSH-approved positive pressure self-contained breathing apparatus.
Hazardous Combustion Products	Carbon monoxide, carbon dioxide and other toxic vapours.
Sensitivity to Static Discharge	This product may be sensitive to static discharge. Bond and ground all containers before transferring material.
Additional Remarks	None

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal Precautions	Eliminate all ignition sources. Isolate hazard area and restrict access. Try to work upwind of spill. Do not touch or walk through spilled material. Do not breathe vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment (see section 8). Shut off leak if it can be done safely.
Environmental Precautions	Prevent substance from entering natural bodies of water and sewer systems. Spilled product may pose a risk to the aquatic ecosystem if released.
Clean Up Methods	SMALL SPILLS: Move containers from spill area. Dilute with water and mop up, or absorb with a dry, inert material. Place residues in a suitable, covered, properly labeled container. If necessary, neutralize the residue with a dilute solution of sodium carbonate. Dispose of via a licensed waste disposal contractor. LARGE SPILLS:. Move containers from spill area. Approach release from upwind. Dike spill area and do not allow product to reach sewage system or surface or ground water. Contain and collect spillage with dry, noncombustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations. Contaminated absorbent material may pose the same hazard as the spilled product. Neutralize the residue with a dilute solution of sodium carbonate.
Additional Remarks	Waste must be disposed of in accordance with federal, state and local environmental control regulations.

SECTION 7. HANDLING AND STORAGE

Fire Prevention	Keep away from heat, open flames, sparks and other sources of ignition. Bond and ground equipment prior to transferring material. Empty containers may contain flammable product residue. Do NOT cut, weld, braze, solder, drill, grind or expose empty containers to heat, flame, sparks, static electricity or other sources of ignition.
Worker Contact	Never add water to this material. Keep container dry. Wear appropriate personal protective equipment. Avoid contact with eyes, skin, and clothing. Avoid breathing vapours or mists. Use only with adequate ventilation. Maintain good personal hygiene. Do not smoke, eat or drink when handling this product. Wash thoroughly after handling product and before eating, drinking or smoking.
Storage Requirements	Store in a cool, dry, well-ventilated area, away from incompatible materials. Keep container tightly closed when not in use. May corrode metallic surfaces. Store in a metallic or coated fiberboard drum using a strong polyethylene inner

	package. Corrosive materials should be stored in a separate safety storage cabinet or room.
Additional Remarks	None

SECTION 8. EXPOSURE CONTROL/PERSONAL PROTECTION

Exposure Guidelines / Limits	Not established for product.
Exposure Guideline / Limits for Components	
Acetic acid	ACGIH TLV: TWA 10 ppm; STEL 15 ppm OSHA PEL: not established
Citric acid	ACGIH TLV: not established OSHA PEL: not established
Please consult with local authorities for acceptable local exposure limits since values can vary from jurisdiction to jurisdiction.	
Engineering Controls	Provide exhaust ventilation or other engineering controls to keep the airborne concentrations below their respective allowable limits. Ensure that eyewash stations and safety showers are near the work location.

Personal Protection

Personal Protective Equipment recommendations are based on anticipated known manufacturing and use conditions. These conditions are expected to result in only incidental exposure. A thorough review of the job tasks and conditions by a safety professional is recommended, however, to determine the level of person protective equipment appropriate for these job tasks and conditions.

Respirator	A respirator should be worn if there is potential for inhalation of vapor or mist in high concentrations. A NIOSH-approved air-purifying mask equipped with organic vapour/acid gas cartridges with N95 prefilters is recommended. In poorly ventilated areas or emergency situations use a NIOSH-approved atmosphere-supplying respirator.
Hands	Butyl rubber or neoprene gloves.
Eyes	Chemical safety goggles. Add a face shield if splashing may occur.
Body	Wear long sleeves and pants of an impervious material to prevent any skin contact. Acid-resistant apron or suit recommended. Remove any contaminated clothing and launder before reuse.
Feet	Steed toed, chemical resistant boots.
Other	Emergency eyewash fountains and safety showers should be in the immediate vicinity of any potential exposure.

Protective Clothing (Pictograms)

Additional Remarks	None

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State	Liquid
Odor and Appearance	Vinegar-like; colorless to yellowish.
Odor Threshold	Not available
Specific Gravity	1.18
Flashpoint	> 200 F (> 93.3 ℃) closed cup
Lower Flammable Limit	Not available
Upper Flammable Limit	Not available
Autoignition Temperature	Not available
Vapour Density (air=1)	1.45
Vapour Pressure	Not available
Evaporation Rate	Not available
Boiling Point	> 212 F (> 100 ℃)
Freezing / Melting Point	Not available
pH	2-4 (1% solution in water)
Viscosity	Not available
Solubility in Water	Not available
Coefficient of Water/Oil	Not available
Additional Remarks	Bulk density 9.87 pounds per gallon

SECTION 10. STABILITY AND REACTIVITY DATA

Chemical Stability	Stable under normal conditions of use and storage.
Conditions of Instability	Avoid excessive heat, open flames and all ignition sources.
Incompatible Material	Oxidizing agents, reducing agents, caustic soda, alkalis, steel, aluminum, zinc,

	copper.
Conditions of Reactivity	Extremely reactive or incompatible with alkalis. Slightly reactive to reactive with metals. Highly reactive with oxidizing agents, reducing agents. Very slightly to slightly reactive with organic material. Aqueous reaction with caustic soda can generate heat (strongly exothermic).
Hazardous Decomposition Products	Not available
Hazardous Polymerization	Will not occur
Additional Remarks	Corrosive to very corrosive in presence of steel. Corrosive to very corrosive in presence of aluminum, of zinc, of copper.

SECTION 11. TOXICOLOGICAL INFORMATION

Acute Toxicity	Not available for product.
Acute Toxicity for Components	
Acetic acid	Acute LD50 (rat, oral): 3310 mg/kg Acute LD50 (rabbit, dermal): 1060 mg/kg Acute LC50 (rat, inhalation):11.4 mg/L/4hr
Effects of Acute Exposure	*See Hazards Identification (Section 2)*
Effects of Chronic Exposure	Repeated or prolonged overexposure to acetic acid may cause injury to the eyes, or damage to the digestive tract, respiratory tract or skin.
Irritancy of Product	*See Hazards Identification (Section 2)*
Skin Sensitization	Prolonged or repeated contact may cause skin sensitization.
Respiratory Sensitization	Not expected
Carcinogenicity	No components listed as carcinogenic by ACGIH, IARC, OSHA or NTP.
Reproductive Toxicity	Not available
Teratogenicity	Not available
Embryotoxicity	Not available
Mutagenicity	Not available
Synergistic Products/Effects	Not available
Additional Remarks	None

SECTION 12. ECOLOGICAL INFORMATION

Ecotoxicity	Product is expected to be harmful to aquatic life. The aquatic toxicity and biodegradation of acetic acid are expected to be influenced by its potential to lower pH.
Aquatic Toxicity for Components	Not available for components.
Degradability	Not available
Bioaccumulation	Not available
Mobility	Not available
Additional Remarks	Do not allow product or run-off from fire control to enter storm or sanitary sewers, lakes, rivers, streams or public waterways. Block off drains and ditches. May be harmful to aquatic life.

SECTION 13. DISPOSAL CONSIDERATIONS

Whatever cannot be saved for recovery or recycling should be managed in an appropriate and approved waste disposal facility. Processing, use or contamination of this product may change the waste management options. State and local disposal regulations may differ from federal disposal regulations. Dispose of container and unused contents in accordance with federal, state and local requirements.

Additional Remarks	None

SECTION 14. TRANSPORT INFORMATION

DOT Classification

CORROSIVE LIQUID, N.O.S. (contains Acetic acid), Class 8, UN1760, PG III

Marine Pollutant	Not available
Additional Transport Information	Reportable Quantity is 1102 gallons.
Emergency Response Guide	Guide 153

SECTION 15. REGULATORY INFORMATION

Federal Regulations	
OSHA	This product is considered hazardous as defined by OSHA Hazard Communication Standard 29CFR 1910.1200.
EPA	**SARA 311 Hazardous Chemical:** Yes
	Hazard Categories: Acute: Yes Chronic : No Fire: No Pressure: No Reactivity: No
TSCA Inventory Status	All components are included or are exempted from listing on the US Toxic Substances Control Act Inventory.

SECTION 16. OTHER INFORMATION

NFPA Rating	Health: 2 Flammability: 1 Instability: 0 Special: none *0=Insignificant 1 = Slight 2= Moderate 3= High 4 = Extreme*
Revisions	New issue.
Prepared by	Trican Well Service Corporate Health, Safety & Environment Department (403) 723-3688

Trican Well Service Ltd. Disclaimer

NOTE: The information on this MSDS is based on data which is considered to be accurate. Trican Well Service Ltd., however, makes no guarantees or warranty, either expressed or implied of the accuracy or completeness of this information.

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This MSDS was prepared and is to be used for this product. If the product is used as a component in another product, this MSDS information may not be applicable.

END OF MATERIAL SAFETY DATA