



Baker Hughes

Material Safety Data Sheet

SECTION I - GENERAL INFORMATION

PRODUCT NAME: **Ferrotrol 300**
ITEM NUMBER : 100090
CHEMICAL DESCRIPTION: Citric acid anhydrous CAS# 77-92-9
PRODUCT USE: Iron control
SUPPLIER: Baker Hughes
ADDRESS: 11211 FM 2920
 Tomball, TX 77375
EMERGENCY TELEPHONE NUMBER **(800)424-9300 for CHEMTREC**
(202)483-7616 Alaska and International
PREPARED BY: Environmental Group
 (281)351-8131
DATE PREPARED: August 31, 2000 Supersedes: January 1995

HMIS HAZARD INDEX

HEALTH: 1
 FLAMMABILITY: 0
 REACTIVITY: 0
 PERSONAL PROTECTION: b

SECTION II - HAZARDOUS COMPONENTS

HAZARDOUS COMPONENTS	CAS #	PERCENT	HAZARD
No hazardous ingredients	N.A.	N.A.	N.A.

SECTION III - FIRE AND EXPLOSION HAZARD DATA

FLASHPOINT (METHOD): N.A.
UPPER EXPLOSION LIMIT(% BY VOL): 65 g/cu.ft.
LOWER EXPLOSION LIMIT(% BY VOL): 8 g/cu.ft.
AUTO-IGNITION TEMPERATURE: 1000 - 1020°C
EXTINGUISHING MEDIA: Product not flammable, use media appropriate for surrounding fire.
SPECIAL FIRE FIGHTING PROCEDURES: None
EXPLOSION DATA: None
HAZARDOUS COMBUSTION PRODUCTS: Carbon monoxide, carbon dioxide

SECTION IV - HEALTH HAZARD DATA

PRIMARY ROUTES OF ENTRY: Skin and eye contact, inhalation

ACUTE OVEREXPOSURE EFFECTS:

SKIN CONTACT: Mild irritant.
SKIN ABSORPTION: Not absorbed by skin.
EYE CONTACT: Eye contact may cause irritation and redness.
INHALATION: Inhalation of high levels of vapors or mists may cause lightheadedness, dizziness, headaches or unconsciousness.
INGESTION: Citric acid has a long history of safe use and is classified by the US FDA as " Generally Recognized as Safe" for use in foods. It is an important intermediate in the Krebs Cycle which represents the pathway of aerobic oxidation of pyruvic acid in man.

CHRONIC OVEREXPOSURE EFFECTS: Long term oral overexposure may cause damage to tooth enamel.

EXPOSURE LIMITS:

HAZARDOUS COMPONENT	ACGIH TLV	OSHA PEL
No hazardous ingredients	N.A.	N.A.

CARCINOGENICITY, REPRODUCTIVE EFFECTS:

Not listed as carcinogen - IARC, NTP, or OSHA

TERATOGENICITY, MUTAGENICITY:

No effects listed.

TOXICITY STUDIES:

LD(50) 6,730mg/kg (oral rat)
LC(50) N.E.

SECTION V - FIRST AID PROCEDURES

FOR EYES: Immediately flush with plenty of water for at least 15 minutes. If irritation persists, contact a physician.
FOR SKIN: Remove contaminated clothes. Immediately wash skin with plenty of water for 15 minutes. Wash clothing before reuse.
FOR INHALATION: Remove to fresh air. If breathing has stopped, give artificial respiration. Keep person warm, quiet and get medical attention.
FOR INGESTION: Not applicable - material recognized as safe

SECTION VI - PHYSICAL DATA

APPEARANCE AND ODOR: White powder or granules, odorless
SPECIFIC GRAVITY: 1.665
VAPOR PRESSURE: N.A.
VAPOR DENSITY (air=1): N.A.
EVAPORATION RATE: N.A.
BOILING POINT: N.A.

FREEZING POINT: N.A.
SOLUBILITY IN H2O: Greater than 50 %
pH: 2.2 0.1N solution

SECTION VII - REACTIVITY DATA

CHEMICAL STABILITY: Stable
INCOMPATIBLE MATERIALS: Organic acids
HAZARDOUS POLYMERIZATION: Does not polymerize
HAZARDOUS DECOMPOSITION PRODUCTS: Carbon monoxide, carbon dioxide

SECTION VIII - SPECIAL/PERSONAL PROTECTION

VENTILATION: The use of mechanical ventilation is recommended whenever this product is used in a confined space. Where engineering controls are not feasible, assure use is in an area where there is natural air movement.

RESPIRATORY PROTECTION: Dust mask
PROTECTIVE GLOVES: Standard work gloves
EYE PROTECTION: Safety glasses
OTHER PROTECTIVE EQUIPMENT: Eyewash bottles or other rinsing equipment should be easily accessible.

SECTION IX - HANDLING PRECAUTIONS

LEAK AND SPILL PROCEDURES: Sweep up and place in suitable containers for reuse or disposal.

WASTE DISPOSAL: If this product becomes a waste it may meet the requirements of a RCRA hazardous waste with the waste code D002. Always dispose of according to local/state/federal regulations.

HANDLING & SPECIAL EQUIPMENT: Keep container tightly closed when not in use.
STORAGE REQUIREMENTS: General chemical storage.

SECTION X - REGULATORY INFORMATION

SHIPPING INFORMATION

PROPER SHIPPING NAME: Not DOT Regulated
HAZARD CLASS: N.A.
UN/NA NUMBER: N.A.
PACKING GROUP W/ "PG": N.A.
SUBSIDIARY RISK: N.A.
REPORTABLE QUANTITY (RQ): N.A.
EMERGENCY RESPONSE GUIDE #: N.A.

ENVIRONMENTAL INFORMATION

SARA TITLE III

SECTION 302/304 This product does not contain ingredients listed as an Extremely Hazardous Substance.
SECTION 311/312 Immediate
SECTION 313 This product does not contain ingredients (at a level of 1% or

greater) on the List of Toxic Chemicals.

OTHER REGULATORY INFORMATION

TSCA INVENTORY:	All of the components in this appear on the TSCA inventory.
CALIFORNIA PROP 65:	None of the chemicals on the current Proposition 65 list are known to be present in this product.

The information contained herein is based on data considered accurate. However, no warranty is expressed or implied regarding the accuracy of these data or the results to be obtained from the use thereof. Vendor assumes no responsibility for injury to vendee or third persons proximately caused by the material if reasonable safety procedures are not adhered to as stipulated in the data sheet. Additionally, vendor assumes no responsibility for injury to vendee or third persons proximately caused by abnormal use of the material even if reasonable safety procedures are followed. Furthermore, vendee assumes the risk in his use of the material.