

SAFETY DATA SHEET

Product Trade Name: 10% Acetic / 1.5% HF

Revision Date: 22-Mar-2021

Revision Number: 1

1. Identification

1.1. Product Identifier

Product Trade Name: 10% Acetic / 1.5% HF
Synonyms: None
Chemical Family: Blend
Internal ID Code: HM009523

1.2 Recommended use and restrictions on use

Application: Not determined
Uses advised against: No information available

1.3 Manufacturer's Name and Contact Details

Manufacturer/Supplier

Halliburton Energy Services, Inc.
P.O. Box 1431
Duncan, Oklahoma 73536-0431
Telephone: 1-281-871-6107

Halliburton Group Canada
645 - 7th Ave SW Suite 1800
Calgary, AB, T2P 4G8, Canada
Telephone: 1-403-231-9300

Prepared By

Chemical Stewardship
e-mail: fdunexchem@halliburton.com

1.4. Emergency telephone number:

Emergency Telephone Number: 1-866-519-4752 or 1-760-476-3962 (accessible 24 hours a day / 7 days a week)
Global Incident Response Access Code: 334305
Contract Number: 14012

2. Hazards Identification

2.1 Classification in accordance with paragraph (d) of §1910.1200

Acute Oral Toxicity	Category 4 - H302
Acute toxicity - Dermal	Category 3 - H311
Acute inhalation toxicity - vapor	Category 3 - H331
Skin Corrosion / Irritation	Category 1 - H314
Serious Eye Damage/Irritation	Category 1 - H318
Specific Target Organ Toxicity - (Repeated Exposure)	Category 1 - H372
Flammable liquids.	Category 3 - H226

2.2. Label Elements

Hazard Pictograms



Signal Word:	Danger
Hazard Statements	<p>H226 - Flammable liquid and vapor H302 - Harmful if swallowed H311 - Toxic in contact with skin H314 - Causes severe skin burns and eye damage H318 - Causes serious eye damage H331 - Toxic if inhaled H372 - Causes damage to organs through prolonged or repeated exposure</p>
Precautionary Statements	
Prevention	<p>P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. P233 - Keep container tightly closed P240 - Ground and bond container and receiving equipment. P241 - Use explosion-proof electrical/ventilating/lighting/equipment P242 - Use only non-sparking tools P243 - Take action to prevent static discharges. P260 - Do not breathe dust/fume/gas/mist/vapors/spray P264 - Wash face, hands and any exposed skin thoroughly after handling P270 - Do not eat, drink or smoke when using this product P271 - Use only outdoors or in a well-ventilated area P280 - Wear protective gloves/protective clothing/eye protection/face protection</p>
Response	<p>P301 + P330 + P331 - IF SWALLOWED: rinse mouth. Do NOT induce vomiting P303 + P361 + P353 - IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower]. P363 - Wash contaminated clothing before reuse P304 + P340 - IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing P310 - Immediately call a POISON CENTER or doctor/physician P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing P370 + P378 - In case of fire: Use CO₂, dry chemical, or foam</p>
Storage	<p>P403 + P233 - Store in a well-ventilated place. Keep container tightly closed P403 + P235 - Store in a well-ventilated place. Keep cool P405 - Store locked up</p>
Disposal	<p>P501 - Dispose of contents/container in accordance with local/regional/national/international regulations</p>

2.3 Hazards not otherwise classified

None known

3. Composition/information on Ingredients

Substances	CAS Number	PERCENT (w/w)	GHS Classification - US
Acetic anhydride	108-24-7	5 - 10%	Acute Tox. 4 (H302) Acute Tox. 3 (H331) Skin Corr. 1B (H314) Eye Corr. 1 (H318) STOT SE 3 (H335) Flam. Liq. 3 (H226)
Organic Acid	Proprietary	5 - 10%	Skin Corr. 1A (H314) Eye Corr. 1 (H318) STOT SE 3 (H335) Flam. Liq. 3 (H226)
Isopropanol	67-63-0	1 - 5%	Eye Irrit. 2 (H319) STOT SE 3 (H336) Flam. Liq. 2 (H225)
Potassium iodide	7681-11-0	1 - 5%	Skin Irrit. 2 (H315) STOT RE 1 (H372)
Hydrofluoric acid	7664-39-3	1 - 5%	Acute Tox. 2 (H300) Acute Tox. 1 (H310) Acute Tox. 2 (H330) Skin Corr. 1A (H314) Eye Corr. 1 (H318) STOT SE 3 (H335) Aquatic Acute 3 (H402)
Rosin amines	Proprietary	1 - 5%	Acute Tox. 4 (H302) Skin Corr. 1C (H314) Eye Corr. 1 (H318)
Organic Acid	Proprietary	1 - 5%	Acute Tox. 3 (H301) Acute Tox. 3 (H311) Acute Tox. 4 (H332) Skin Corr. 1B (H314) Eye Corr. 1 (H318) STOT SE 3 (H335) Aquatic Acute 3 (H402)

The specific chemical identity of the composition has been withheld as proprietary. The exact percentage (concentration) of the composition has been withheld as proprietary.

4. First Aid Measures

4.1. Description of first aid measures

Inhalation	Move to fresh air. If breathing is difficult, give oxygen. If not breathing, give artificial respiration. Seek immediate medical attention/advice.
Eyes	In case of contact, immediately flush eyes with plenty of water for at least 30 minutes. Remove contact lenses after the first 5 minutes and continue washing. Seek immediate medical attention/advice. Suitable emergency eye wash facility should be immediately available
Skin	In case of contact, immediately flush skin with plenty of soap and water for at least 30 minutes and remove contaminated clothing, shoes and leather goods immediately. Get medical attention immediately.
Ingestion	Do NOT induce vomiting. Rinse mouth. Never give anything by mouth to an unconscious person. Obtain immediate medical attention.

4.2 Most important symptoms/effects, acute and delayed

Causes severe eye irritation which may damage tissue. Causes severe skin irritation with tissue destruction. Harmful if swallowed. Toxic in contact with skin. Toxic if inhaled. May cause damage to organs through prolonged or repeated

exposure.

4.3. Indication of any immediate medical attention and special treatment needed

Notes to Physician

Treat symptomatically.

5. Fire-fighting measures

5.1. Extinguishing media

Suitable Extinguishing Media

Water fog, carbon dioxide, foam, dry chemical.

Extinguishing media which must not be used for safety reasons

Do NOT spray pool fires directly with water. A solid stream of water directed into hot burning liquid can cause splattering.

5.2 Specific hazards arising from the substance or mixture

Special exposure hazards in a fire

Decomposition in fire may produce harmful gases. Vapors are heavier than air and may accumulate in low areas. Vapors may travel along the ground to be ignited at distant locations.

5.3 Special protective equipment and precautions for fire-fighters

Special protective equipment for firefighters

Full protective clothing and approved self-contained breathing apparatus required for fire fighting personnel.

6. Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Avoid contact with skin, eyes and clothing. Do not breathe dust/fume/gas/mist/vapors/spray. Ensure adequate ventilation. Use appropriate protective equipment. Remove sources of ignition. Take precautionary measures against static discharges. All equipment used when handling the product must be grounded. See Section 8 for additional information.

6.2. Environmental precautions

Prevent from entering sewers, waterways, or low areas.

6.3. Methods and material for containment and cleaning up

Remove ignition sources and work with non-sparking tools. Dike far ahead of liquid spill for later disposal. Soak up with inert absorbent material. Pick up and transfer to properly labeled containers.

7. Handling and storage

7.1. Precautions for safe handling

Handling Precautions

Avoid contact with eyes, skin, or clothing. Do not breathe dust/fume/gas/mist/vapors/spray. Ensure adequate ventilation. Use appropriate protective equipment. Remove sources of ignition. Ground and bond containers when transferring from one container to another.

Hygiene Measures

Handle in accordance with good industrial hygiene and safety practice.

7.2. Conditions for safe storage, including any incompatibilities

Storage Information

Store in a cool well ventilated area. Store away from oxidizers. Store away from alkalis. Keep from heat, sparks, and open flames. Keep container closed when not in use.

8. Exposure Controls/Personal Protection

8.1 Occupational Exposure Limits

Substances	CAS Number	OSHA PEL-TWA	ACGIH TLV-TWA
Acetic anhydride	108-24-7	TWA: 5 ppm TWA: 20 mg/m ³	TWA: 1 ppm STEL: 3 ppm
Organic Acid	Proprietary	TWA: 10 ppm TWA: 25 mg/m ³	TWA: 10 ppm STEL: 15 ppm
Isopropanol	67-63-0	TWA: 400 ppm TWA: 980 mg/m ³	TWA: 200 ppm STEL: 400 ppm
Potassium iodide	7681-11-0	Not applicable	TWA: 0.01 ppm
Hydrofluoric acid	7664-39-3	TWA: 3 ppm	TWA: 0.5 ppm TWA: 2.5 mg/m ³ Ceiling: 2 ppm
Rosin amines	Proprietary	Not applicable	Not applicable
Organic Acid	Proprietary	Not applicable	TWA: 1 ppm

8.2 Appropriate engineering controls

Engineering Controls Ensure adequate ventilation, especially in confined areas

8.3 Individual protection measures, such as personal protective equipment

Personal Protective Equipment If engineering controls and work practices cannot prevent excessive exposures, the selection and proper use of personal protective equipment should be determined by an industrial hygienist or other qualified professional based on the specific application of this product.

Respiratory Protection If engineering controls and work practices cannot keep exposure below occupational exposure limits or if exposure is unknown, wear a NIOSH certified, European Standard EN 149, AS/NZS 1715:2009, or equivalent respirator when using this product. Selection of and instruction on using all personal protective equipment, including respirators, should be performed by an Industrial Hygienist or other qualified professional. Organic vapor/acid gas respirator.

Hand Protection Impervious gloves Manufacturer's directions for use should be observed because of great diversity of types.

Skin Protection Wear impervious protective clothing, including boots, gloves, lab coat, apron, rain jacket, pants or coverall, as appropriate, to prevent skin contact.

Eye Protection Chemical goggles; also wear a face shield if splashing hazard exists.

Other Precautions Eyewash fountains and safety showers must be easily accessible.

9. Physical and Chemical Properties

9.1. Information on basic physical and chemical properties

Physical State: Liquid **Color** Colorless to Light Amber
Odor: Pungent acrid **Odor** No information available
Threshold:

<u>Property</u>	<u>Values</u>
Remarks/ - Method	
pH:	< 1
Freezing Point / Range	No data available
Melting Point / Range	No data available
Pour Point / Range	No data available
Boiling Point / Range	No data available
Flash Point	No data available
Flammability (solid, gas)	No data available
Upper flammability limit	No data available
Lower flammability limit	No data available
Evaporation rate	No data available
Vapor Pressure	No data available

Vapor Density	No data available
Specific Gravity	No data available
Water Solubility	Soluble in water
Solubility in other solvents	No data available
Partition coefficient: n-octanol/water	No data available
Autoignition Temperature	No data available
Decomposition Temperature	No data available
Viscosity	No data available
Explosive Properties	No information available
Oxidizing Properties	No information available

9.2. Other information

VOC Content (%)	No data available
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10. Stability and Reactivity**10.1. Reactivity**

Not expected to be reactive.

10.2. Chemical stability

Stable

10.3. Possibility of hazardous reactions

Will Not Occur

10.4. Conditions to avoid

Keep away from heat, sparks and flame.

10.5. Incompatible materials

Strong oxidizers. Strong alkalis.

10.6. Hazardous decomposition products

Carbon oxides. Fluorides.

11. Toxicological Information**11.1 Information on likely routes of exposure**

Principle Route of Exposure Ingestion. Skin contact. Eye contact. Inhalation.

11.2 Symptoms related to the physical, chemical and toxicological characteristics**Acute Toxicity**

Inhalation	Toxic if inhaled. Causes severe respiratory irritation.
Eye Contact	Causes serious eye damage.
Skin Contact	Toxic in contact with skin. Causes severe burns.
Ingestion	Harmful if swallowed. Causes burns of the mouth, throat and stomach.

Chronic Effects/Carcinogenicity Prolonged or repeated exposure may cause damage to the thyroid gland.

11.3 Toxicity data**Toxicology data for the components**

Substances	CAS Number	LD50 Oral	LD50 Dermal	LC50 Inhalation
Acetic anhydride	108-24-7	630 mg/kg bw (rat)	4000 mg/kg bw (rabbit)	4.1 mg/L (rat, vapor, 4h)
Organic Acid	Proprietary	No data available	1060 mg/kg-bw (rabbit)	11.4 mg/L (rat, 4 h, vapor)
Isopropanol	67-63-0	4700 mg/kg-bw (rat)	12870 mg/kg-bw (rabbit)	72.6 mg/L (Rat, 4h, vapor)
Potassium iodide	7681-11-0	2779 mg/kg (Rat)	No data available	No data available

Hydrofluoric acid	7664-39-3	LDLo 80 mg/kg	Not applicable due to corrosivity of the substance.	1276 mg/L (Rat) 1h 850 mg/L (Rat) 1h 0.14 mg/L (Mouse) 4h
Rosin amines	Proprietary	2500 mg/kg (rat) (similar substance) 700 mg/kg (guinea pig) (similar substance)	No data available	No data available
Organic Acid	Proprietary	73 mg/kg-bw (rat)	848 mg/kg-bw (rabbit)	1.388 mg/L (rat, 4 hr, aerosol)

Substances	CAS Number	Skin corrosion/irritation
Acetic anhydride	108-24-7	Corrosive to skin
Organic Acid		Extremely corrosive and destructive to tissue Skin, rabbit:
Isopropanol	67-63-0	Non-irritating to the skin (Rabbit)
Potassium iodide	7681-11-0	Causes moderate skin irritation. (Rabbit) (similar substances)
Hydrofluoric acid	7664-39-3	Corrosive to skin (Rabbit)
Rosin amines		Skin, rabbit: Causes burns
Organic Acid		Corrosive to skin

Substances	CAS Number	Serious eye damage/irritation
Acetic anhydride	108-24-7	Causes severe eye burns.
Organic Acid		Eye, rabbit: Causes serious eye damage
Isopropanol	67-63-0	Causes moderate eye irritation (Rabbit)
Potassium iodide	7681-11-0	Non-irritating to the eye
Hydrofluoric acid	7664-39-3	Corrosive to eyes (Rabbit)
Rosin amines		Causes eye burns
Organic Acid		Corrosive to eyes

Substances	CAS Number	Skin Sensitization
Acetic anhydride	108-24-7	Not regarded as a sensitizer.
Organic Acid		Not regarded as a sensitizer.
Isopropanol	67-63-0	Did not cause sensitization on laboratory animals (guinea pig)
Potassium iodide	7681-11-0	Not regarded as a sensitizer.
Hydrofluoric acid	7664-39-3	Not applicable due to corrosivity of the substance.
Rosin amines		May cause sensitization by skin contact
Organic Acid		Not regarded as a sensitizer.

Substances	CAS Number	Respiratory Sensitization
Acetic anhydride	108-24-7	No information available
Organic Acid		No information available
Isopropanol	67-63-0	No information available
Potassium iodide	7681-11-0	No information available
Hydrofluoric acid	7664-39-3	No information available
Rosin amines		No information available
Organic Acid		No information available

Substances	CAS Number	Mutagenic Effects
Acetic anhydride	108-24-7	In vitro tests did not show mutagenic effects In vivo tests did not show mutagenic effects.
Organic Acid		In vivo tests did not show mutagenic effects. In vitro tests did not show mutagenic effects
Isopropanol	67-63-0	In vitro tests did not show mutagenic effects. In vivo tests did not show mutagenic effects.
Potassium iodide	7681-11-0	In vitro tests did not show mutagenic effects In vivo tests did not show mutagenic effects.
Hydrofluoric acid	7664-39-3	No data of sufficient quality are available.
Rosin amines		No information available
Organic Acid		In vitro tests did not show mutagenic effects. In vivo tests did not show mutagenic effects.

Substances	CAS Number	Carcinogenic Effects
Acetic anhydride	108-24-7	No information available
Organic Acid		Did not show carcinogenic effects in animal experiments
Isopropanol	67-63-0	Did not show carcinogenic effects in animal experiments
Potassium iodide	7681-11-0	Did not show carcinogenic effects in animal experiments
Hydrofluoric acid	7664-39-3	Not regarded as carcinogenic.
Rosin amines		No information available
Organic Acid		Did not show carcinogenic effects in animal experiments

Substances	CAS Number

		Reproductive toxicity
Acetic anhydride	108-24-7	Not a confirmed teratogen or embryotoxin.
Organic Acid		Did not show teratogenic effects in animal experiments. Animal testing did not show any effects on fertility.
Isopropanol	67-63-0	Animal testing did not show any effects on fertility.
Potassium iodide	7681-11-0	Animal testing did not show any effects on fertility. Did not show teratogenic effects in animal experiments.
Hydrofluoric acid	7664-39-3	Did not show teratogenic effects in animal experiments. Not a confirmed reproductive toxicant. (similar substances)
Rosin amines		No information available
Organic Acid		Animal testing did not show any effects on fertility. Did not show teratogenic effects in animal experiments.

Substances	CAS Number	STOT - single exposure
Acetic anhydride	108-24-7	May cause respiratory irritation.
Organic Acid		May cause respiratory irritation. No information available
Isopropanol	67-63-0	May cause headache, dizziness, and other central nervous system effects.
Potassium iodide	7681-11-0	No information available
Hydrofluoric acid	7664-39-3	Not applicable due to corrosivity of the substance. (similar substances)
Rosin amines		May cause respiratory irritation.
Organic Acid		May cause respiratory irritation.

Substances	CAS Number	STOT - repeated exposure
Acetic anhydride	108-24-7	Not applicable due to corrosivity of the substance.
Organic Acid		No significant toxicity observed in animal studies at concentration requiring classification.
Isopropanol	67-63-0	No significant toxicity observed in animal studies at concentration requiring classification. (similar substances)
Potassium iodide	7681-11-0	Causes damage to organs through prolonged or repeated exposure if swallowed: (Thyroid)
Hydrofluoric acid	7664-39-3	Not applicable due to corrosivity of the substance. (similar substances)
Rosin amines		No information available
Organic Acid		Not applicable due to corrosivity of the substance.

Substances	CAS Number	Aspiration hazard
Acetic anhydride	108-24-7	Not applicable
Organic Acid		Not applicable
Isopropanol	67-63-0	Not applicable
Potassium iodide	7681-11-0	Not applicable
Hydrofluoric acid	7664-39-3	Not applicable
Rosin amines		No information available
Organic Acid		Not applicable

12. Ecological Information

12.1. Toxicity

Ecotoxicity effects

Product is not classified as hazardous to the environment.

Substance Ecotoxicity Data

Substances	CAS Number	Toxicity to Algae	Toxicity to Fish	Toxicity to Microorganisms	Toxicity to Invertebrates
Acetic anhydride	108-24-7	EC50 (72 h) >300.82 mg/L (Skeletonema costatum) EC50 (72 h) >300.82 mg/L (Skeletonema costatum)	LC50 (96 h) >300.82 mg/L (Danio rerio)	NOEC (16h) 1150 mg/L (Pseudomonas putida) (similar substance)	LC50 (24) 55 mg/L (Daphnia magna)
Organic Acid	Proprietary	EC50(72h)=55.22 mg/L (Anabaena flos-aquae)	LC50(96 h)=251 mg/L (Gambusia affinis) LC50(96 h)=75 mg/L (Lepomis macrochirus)	NOAEC (16 h) =1150 mg/L (Pseudomonas putida)	EC50(48 h)=65 mg/L (Daphnia magna)
Isopropanol	67-63-0	EC50 (72h) > 1000 mg/L (Desmodesmus subspicatus) EC50 (7d) 1800 mg/L	LC50 (96h) 9640 mg/L (Pimephales promelas) LC50 (7d) 7060 mg/L (Poecilia reticulata)	TT (16h) 1050 mg/L (Pseudomonas putida)	EC50 (48 h)=2285 mg/L (Daphnia sp.) EC50 (24h) > 10,000 mg/L (Daphnia magna)

		(meanextinction value)(Scenedesmus quadricauda)			
Potassium iodide	7681-11-0	MIC100 (10d) 356.8 mg/L (Dunaliella salina) TT (7d) 2370 mg/L (biomass) (Scenedesmus quadricauda) (Similar substance)	LC50 (96h) 896 mg/L (Oncorhynchus mykiss) LC50 (96h) 3780 mg/L (Oncorhynchus mykiss) (similar substance) LC100 (22d) 166,002.8 mg/L (Oncorhynchus mykiss)	MIC100 (24h) 358.3 mg/L (Staphylococcus auerus)	EC50 (48h) 7.5 mg/L (Daphnia magna) LC50 (48h) 575 mg/L (Acartia tonsa) EC50 (10d) 218.8 mg/L (Corophium volutator)
Hydrofluoric acid	7664-39-3	EC50 (96h) 122 mg/L (Selenastrum capricornutum) EC50 (96h) 43 mg/L (Scenedesmus Sp.) NOEC (14-21d) 200 mg/L (Dunaliella tertiolecta)	EC50 (96h) 51 mg/L (Oncorhynchus mykiss) NOEC (21d) 4 mg/L (Oncorhynchus mykiss)	NOEC (48h) 83 mg/L (Chilomonas paramacium)	EC50 (48h) 26.48 mg/L (Daphnia magna) EC50 (120h) 20 mg/L (Perna perna) NOEC (21d) 3.7 mg/L (Daphnia magna)
Rosin amines	Proprietary	No information available	No information available	No information available	No information available
Organic Acid	Proprietary	EC50 (72h) > 100 mg/L (Scenedesmus subspicatus) (similar substance)	LC50 (96h) > 100 mg/L (Oncorhynchus mykiss)	EC50 (3h) 530 mg/L (Activated sludge) (similar substance)	EC50 (48h) 38 mg/L (Daphnia magna)

12.2. Persistence and degradability

Substances	CAS Number	Persistence and Degradability
Acetic anhydride	108-24-7	Readily biodegradable (96% @ 20d)
Organic Acid	Proprietary	Readily biodegradable (99% @ 7d)
Isopropanol	67-63-0	Readily biodegradable (53% @ 5d)
Potassium iodide	7681-11-0	Readily biodegradable (50% @ 15d) (calculated)
Hydrofluoric acid	7664-39-3	The methods for determining biodegradability are not applicable to inorganic substances.
Rosin amines	Proprietary	No information available
Organic Acid	Proprietary	(67% @ 28d)

12.3. Bioaccumulative potential

Substances	CAS Number	Bioaccumulation
Acetic anhydride	108-24-7	LogPow -0.5774
Organic Acid	Proprietary	LogPow-0.17
Isopropanol	67-63-0	LogPow < 4.5
Potassium iodide	7681-11-0	0.11
Hydrofluoric acid	7664-39-3	BCF = 3.2 and <2 (similar substances) Log Kow = -1.4
Rosin amines	Proprietary	Log Kow = 6.29
Organic Acid	Proprietary	Log Pow <0

12.4. Mobility in soil

Substances	CAS Number	Mobility
Acetic anhydride	108-24-7	KOC = 1.339 (Calculated)
Organic Acid	Proprietary	No information available
Isopropanol	67-63-0	No information available
Potassium iodide	7681-11-0	No information available
Hydrofluoric acid	7664-39-3	No information available
Rosin amines	Proprietary	No information available
Organic Acid	Proprietary	No information available

12.5 Other adverse effects

No information available

13. Disposal Considerations

13.1. Waste treatment methods

Disposal methods Disposal should be made in accordance with federal, state, and local regulations.
Contaminated Packaging Follow all applicable national or local regulations.

14. Transport Information**US DOT**

UN Number UN2922
UN proper shipping name: Corrosive Liquid, Toxic, N.O.S. (Contains Hydrochloric Acid, Hydrofluoric Acid)
Transport Hazard Class(es): 8 (6.1)
Packing Group: III
Environmental Hazards: Not applicable
Reportable Quantity: RQ (Hydrofluoric Acid - 3027 kg.)
NAERG: NAERG 154

Canadian TDG

UN Number UN2922
UN proper shipping name: Corrosive Liquid, Toxic, N.O.S. (Contains Hydrochloric Acid, Hydrofluoric Acid)
Transport Hazard Class(es): 8 (6.1)
Packing Group: III
Environmental Hazards: Not applicable

IMDG/IMO

UN Number UN2922
UN proper shipping name: Corrosive Liquid, Toxic, N.O.S. (Contains Hydrochloric Acid, Hydrofluoric Acid)
Transport Hazard Class(es): 8 (6.1)
Packing Group: III
Environmental Hazards: Not applicable
Reportable Quantity: RQ (Hydrofluoric Acid - 3027 kg.)
EMS: EmS F-A, S-B

IATA/ICAO

UN Number UN2922
UN proper shipping name: Corrosive Liquid, Toxic, N.O.S. (Contains Hydrochloric Acid, Hydrofluoric Acid)
Transport Hazard Class(es): 8
Packing Group: III
Environmental Hazards: Not applicable
Reportable Quantity: RQ (Hydrofluoric Acid - 3027 kg.)

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code Not applicable

Special Precautions for User None

15. Regulatory Information**US Regulations**

US TSCA Inventory All components listed on inventory or are exempt.

TSCA Significant New Use Rules - S5A2

Substances	CAS Number	TSCA Significant New Use Rules - S5A2	TSCA Section 5(E) Consent Orders
Acetic anhydride	108-24-7	Not applicable	Not applicable
Organic Acid	Proprietary	Not applicable	Not applicable
Isopropanol	67-63-0	Not applicable	Not applicable
Potassium iodide	7681-11-0	Not applicable	Not applicable

Hydrofluoric acid	7664-39-3	Not applicable	Not applicable
Rosin amines	Proprietary	Not applicable	Not applicable
Organic Acid	Proprietary	Not applicable	Not applicable

EPA SARA Title III Extremely Hazardous Substances

Substances	CAS Number	EPA SARA Title III Extremely Hazardous Substances
Acetic anhydride	108-24-7	Not applicable
Organic Acid	Proprietary	Not applicable
Isopropanol	67-63-0	Not applicable
Potassium iodide	7681-11-0	Not applicable
Hydrofluoric acid	7664-39-3	100 lb
Rosin amines	Proprietary	Not applicable
Organic Acid	Proprietary	Not applicable

EPA SARA (311,312) Hazard Class

Flammable (gases, aerosols, liquids, or solids)

Acute toxicity (any route of exposure)

Skin Corrosion or Irritation

Serious eye damage or eye irritation

Specific target organ toxicity (single or repeated exposure)

EPA SARA (313) Chemicals

Substances	CAS Number	Toxic Release Inventory (TRI) - Group I	Toxic Release Inventory (TRI) - Group II
Acetic anhydride	108-24-7	Not applicable	Not applicable
Organic Acid	Proprietary	Not applicable	Not applicable
Isopropanol	67-63-0	1.0%	Not applicable
Potassium iodide	7681-11-0	Not applicable	Not applicable
Hydrofluoric acid	7664-39-3	1.0%	Not applicable
Rosin amines	Proprietary	Not applicable	Not applicable
Organic Acid	Proprietary	Not applicable	Not applicable

EPA CERCLA/Superfund Reportable Spill Quantity

Substances	CAS Number	CERCLA RQ
Acetic anhydride	108-24-7	5000 lb 2270 kg
Organic Acid	Proprietary	5000 lb 2270 kg
Isopropanol	67-63-0	Not applicable
Potassium iodide	7681-11-0	Not applicable
Hydrofluoric acid	7664-39-3	100 lb 45.4 kg
Rosin amines	Proprietary	Not applicable
Organic Acid	Proprietary	Not applicable

EPA RCRA Hazardous Waste Classification

If product becomes a waste, it does meet the criteria of a hazardous waste as defined by the US EPA, because of:

Ignitability D001

Corrosivity D002

California Proposition 65

Substances	CAS Number	California Proposition 65
Acetic anhydride	108-24-7	Not applicable
Organic Acid	Proprietary	Not applicable
Isopropanol	67-63-0	Not applicable
Potassium iodide	7681-11-0	Not applicable
Hydrofluoric acid	7664-39-3	Not applicable
Rosin amines	Proprietary	Not applicable
Organic Acid	Proprietary	Not applicable

U.S. State Right-to-Know Regulations

Substances	CAS Number	MA Right-to-Know Law	NJ Right-to-Know Law	PA Right-to-Know Law
Acetic anhydride	108-24-7	Present	Present	Environmental hazard
Organic Acid	Proprietary	Present	Present	Environmental hazard
Isopropanol	67-63-0	Present	Present	Environmental hazard
Potassium iodide	7681-11-0	Not applicable	Not applicable	Not applicable
Hydrofluoric acid	7664-39-3	Extraordinarily hazardous	Present	Environmental hazard
Rosin amines	Proprietary	Not applicable	Not applicable	Not applicable
Organic Acid	Proprietary	Present	Present	Present

Canadian Regulations

Canadian Domestic Substances All components listed on inventory or are exempt.
List (DSL)

16. Other information**Preparation Information**

Prepared By Chemical Stewardship
e-mail: fdunexchem@halliburton.com

Revision Date: 22-Mar-2021

Reason for Revision Initial Release

Additional information

For additional information on the use of this product, contact your local Halliburton representative.

For questions about the Safety Data Sheet for this or other Halliburton products, contact Chemical Stewardship at 1-580-251-4335.

Key or legend to abbreviations and acronyms used in the safety data sheet

bw – body weight
CAS – Chemical Abstracts Service
d - day
EC50 – Effective Concentration 50%
ErC50 – Effective Concentration growth rate 50%
h - hour
LC50 – Lethal Concentration 50%
LD50 – Lethal Dose 50%
LL50 – Lethal Loading 50%
mg/kg – milligram/kilogram
mg/L – milligram/liter
mg/m³ - milligram/cubic meter
mm - millimeter
mmHg - millimeter mercury
NIOSH – National Institute for Occupational Safety and Health
NTP – National Toxicology Program
OEL – Occupational Exposure Limit
PEL – Permissible Exposure Limit
ppm – parts per million
STEL – Short Term Exposure Limit
TWA – Time-Weighted Average
UN – United Nations
w/w - weight/weight

Key literature references and sources for data

www.ChemADVISOR.com/

Disclaimer Statement

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End of Safety Data Sheet