

Material Safety Data Sheet
Fix-Rite II

Section 1 - Chemical Product and Company Identification

MSDS Name:

Fix-Rite II

Catalog Numbers:

90-221-4

Synonyms:

None Known.

Company Identification:

Richard Allan Scientific
4481 Campus Drive
Kalamazoo, MI 49008

Company Phone Number:

800-522-7270

Emergency Phone Number:

800-424-9300

CHEMTREC Phone Number, US:

(800) 424-9300

CHEMTREC Phone Number, Europe:

(202) 483-7616

Section 2 - Composition, Information on Ingredients

CAS#	Chemical Name:	Percent	EINECS/ ELINCS	Hazard Symbols	Risk Phrases
67-63-0	Isopropyl alcohol	74-76	200-661-7	F XI	11 36 67
67-64-1	Acetone	20-23	200-662-2	F XI	11 36 66 67
7732-18-5	Deionized Water	1-2	231-791-2		
25322-68-3	Polyethylene glycol	1-2	Not available		

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Section 3 - Hazards Identification

EMERGENCY OVERVIEW

Appearance: Clear, colorless liquid

Danger! Extremely flammable liquid and vapor. Vapor may cause flash fire.

Breathing vapors may cause drowsiness and dizziness. Causes eye and respiratory tract irritation. Repeated exposure may cause skin dryness or cracking. Aspiration hazard if swallowed. Can enter lungs and cause damage. May form explosive peroxides. Flash Point: 12.2°C.

Target Organs: Central nervous system, Eyes, Skin

Potential Health Effects

Eye:

Produces irritation, characterized by a burning sensation, redness, tearing, inflammation, and possible corneal injury.

Skin:

Prolonged and/or repeated contact may cause defatting of the skin and dermatitis. May cause irritation with pain and stinging, especially if the skin is abraded.

Ingestion:

May cause gastrointestinal irritation with nausea, vomiting and diarrhea. May cause central nervous system depression, characterized by excitement, followed by headache, dizziness, drowsiness, and nausea. Advanced stages may cause collapse, unconsciousness, coma and possible death due to respiratory failure. Aspiration of material into the lungs may cause chemical pneumonitis, which may be fatal. Possible aspiration hazard.

Inhalation:

Inhalation of high concentrations may cause central nervous system effects characterized by nausea, headache, dizziness, unconsciousness and coma. Inhalation of vapor may cause respiratory tract irritation. May cause narcotic effects in high concentration.

Chronic:

Prolonged or repeated skin contact may cause defatting and dermatitis.

Section 4 - First Aid Measures

Eyes:

Immediately flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical aid immediately.

Skin:

Immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Get medical aid if irritation develops or persists. Wash clothing before reuse.

Ingestion:

Potential for aspiration if swallowed. Get medical aid immediately. Do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. If vomiting occurs naturally, have victim lean forward.

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Inhalation:

Get medical aid immediately. Remove from exposure and move to fresh air immediately. If breathing is difficult, give oxygen. If breathing has ceased apply artificial respiration using oxygen and a suitable mechanical device such as a bag and a mask.

Notes to Physician:

Treat symptomatically and supportively.

Section 5 - Fire Fighting Measures

General Information:

As in any fire, wear a self-contained breathing apparatus in pressure-demand, MSHA/NIOSH (approved or equivalent), and full protective gear. Vapors can travel to a source of ignition and flash back. Containers may explode in the heat of a fire. May form explosive peroxides. Vapors may be heavier than air. They can spread along the ground and collect in low or confined areas.

Extinguishing Media:

For small fires, use water spray, dry chemical, carbon dioxide or chemical foam. Use water spray to cool fire-exposed containers. Water may be ineffective. Use agent most appropriate to extinguish fire.

Autoignition Temperature:

Not applicable.

Explosion Limits:

Lower: 2.5 Upper: 12.0

Flash Point:

12.2°C (53.96°F)

NFPA Rating:

(estimated) Health: 2; Flammability: 3; Instability: 0

Section 6 - Accidental Release Measures

General Information:

Use proper personal protective equipment as indicated in Section 8.

Spills/Leaks:

Absorb spill with inert material (e.g. vermiculite, sand or earth), then place in suitable container. Clean up spills immediately, observing precautions in the Protective Equipment section. Scoop up with a nonsparking tool, then place into a suitable container for disposal. Remove all sources of ignition. Provide ventilation.

Section 7 - Handling and Storage

Handling:

Wash thoroughly after handling. Wash thoroughly after handling. Use only in a well-ventilated area. Use spark-proof tools and explosion proof equipment. Do not get in eyes, on skin, or on clothing. Empty containers retain product residue, (liquid and/or vapor), and can be dangerous. Keep container tightly closed. Do not ingest or inhale. Do not pressurize, cut, weld, braze, solder, drill, grind, or expose empty containers to heat, sparks or open flames.

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Storage:

Keep away from heat, sparks, and flame. Keep away from sources of ignition. Store in a tightly closed container. Store in a cool, dry, well-ventilated area away from incompatible substances. Containers should be dated when opened and tested periodically for the presence of peroxides. Should crystals form in a peroxidizable liquid, peroxidation may have occurred and the product should be considered extremely dangerous. In this instance, the container should only be opened remotely by professionals. All peroxidizable substances should be stored away from heat and light and be protected from ignition sources.

Section 8 - Exposure Controls, Personal Protection

Engineering Controls:

Use process enclosure, local exhaust ventilation, or other engineering controls to control airborne levels below recommended exposure limits. Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower.

Exposure Limits

Chemical Name:	ACGIH	NIOSH	OSHA
Isopropyl alcohol	200 ppm TWA;400 ppm STEL	400 ppm TWA; 980 mg/m3 TWA 2000 ppm IDLH	400 ppm TWA; 980 mg/m3 TWA;
Acetone	500 ppm TWA;750 ppm STEL	250 ppm TWA; 590 mg/m3 TWA 2500 ppm IDLH	1000 ppm TWA; 2400 mg/m3 TWA;
Deionized Water	None listed	None listed	None listed
Polyethylene glycol	None listed	None listed	None listed

OSHA Vacated PELs

Isopropyl alcohol: 400 ppm TWA; 980 mg/m3 TWA
Acetone: 750 ppm TWA; 1800 mg/m3 TWA

Personal Protective Equipment

Eyes:

Wear chemical splash goggles.

Skin:

Wear appropriate protective gloves to prevent skin exposure.

Clothing:

Wear appropriate protective clothing to prevent skin exposure.

Respirators:

Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use a NIOSH/MSHA or European Standard EN 149 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced.

Section 9 - Physical and Chemical Properties

Physical State: Liquid
Color: Clear, colorless
Odor: Pungent odor.
pH: No information found

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Vapor Pressure: No information found
Vapor Density: No information found
Evaporation Rate: No information found
Viscosity: No information found
Boiling Point: 56.1-82°C
Freezing/Melting Point: No information found
Decomposition Temperature: No information found
Solubility in water: Complete in water.
Specific Gravity/Density: No information found
Molecular Formula: Solution
Molecular Weight: No information found

Section 10 - Stability and Reactivity

Chemical Stability:

Stable at room temperature in closed containers under normal storage and handling conditions. This material may be sensitive to peroxide formation.

Conditions to Avoid:

Ignition sources, excess heat

Incompatibilities with Other Materials

Strong reducing agents, Isopropanol is susceptible to autoxidation and therefore should be classified as peroxidizable.

Hazardous Decomposition Products

Oxides of carbon

Hazardous Polymerization

Will not occur.

Section 11 - Toxicological Information

RTECS:

CAS# 67-63-0: NT8050000
CAS# 67-64-1: AL3150000
CAS# 7732-18-5: ZC0110000
CAS# 25322-68-3: TQ3500000; TQ3520000; TQ3560000; TQ3580000; TQ3600000; TQ3610000;
TQ3620000; TQ3630000; TQ3650000; TQ3675000; TQ3700000; TQ3800000; TQ3850000; TQ4025000;
TQ4026000; TQ4027000; TQ4028000; TQ4030000; TQ4040000; TQ4041000; TQ4050000; TQ4070000;
TQ4100000; TQ4105000; TQ4110000; TQ4950000; TQ5090000; TR1579850; ZD2465300

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LD50/LC50:

CAS# 67-63-0:

Draize test, rabbit, eye: 100 mg Severe
Draize test, rabbit, eye: 10 mg Moderate
Draize test, rabbit, eye: 100 mg/24H Moderate
Draize test, rabbit, skin: 500 mg Mild
Inhalation, mouse: LC50 = 53000 mg/m³
Inhalation, rat: LC50 = 16000 ppm/8H
Inhalation, rat: LC50 = 72600 mg/m³
Oral, mouse: LD50 = 3600 mg/kg
Oral, mouse: LD50 = 3600 mg/kg
Oral, rabbit: LD50 = 6410 mg/kg
Oral, rat: LD50 = 5045 mg/kg
Oral, rat: LD50 = 5000 mg/kg
Skin, rabbit: LD50 = 12800 mg/kg.

CAS# 67-64-1:

Dermal, guinea pig: LD50 = >9400 uL/kg
Draize test, rabbit, eye: 20 mg Severe
Draize test, rabbit, eye: 20 mg/24H Moderate
Draize test, rabbit, eye: 10 uL Mild
Draize test, rabbit, skin: 500 mg/24H Mild
Inhalation, mouse: LC50 = 44 gm/m³/4H
Inhalation, rat: LC50 = 50100 mg/m³/8H
Oral, mouse: LD50 = 3 gm/kg
Oral, rabbit: LD50 = 5340 mg/kg
Oral, rat: LD50 = 5800 mg/kg.

CAS# 7732-18-5:

Oral, rat: LD50 = >90 mL/kg.

CAS# 25322-68-3:

Draize test, rabbit, eye: 500 mg/24H Mild
Draize test, rabbit, eye: 100 uL Mild
Draize test, rabbit, eye: 500 mg Mild
Draize test, rabbit, eye: 500 mg Mild
Draize test, rabbit, eye: 500 mg Mild
Draize test, rabbit, eye: 500 mg Mild
Draize test, rabbit, eye: 500 mg/24H Mild
Draize test, rabbit, eye: 500 mg/24H Mild
Draize test, rabbit, eye: 500 mg Mild
Draize test, rabbit, eye: 500 mg/24H Mild
Draize test, rabbit, skin: 500 mg/24H Mild
Draize test, rabbit, skin: 500 mg/24H Mild
Draize test, rabbit, skin: 500 mg Mild
Oral, mouse: LD50 = 34 gm/kg
Oral, mouse: LD50 = 31 gm/kg
Oral, mouse: LD50 = 28915 mg/kg
Oral, mouse: LD50 = 36 gm/kg

Carcinogenicity:

CAS# 67-63-0: Not listed as a carcinogen by ACGIH, IARC, NTP, or CA Prop 65.

CAS# 67-64-1: Not listed as a carcinogen by ACGIH, IARC, NTP, or CA Prop 65.

CAS# 7732-18-5: Not listed as a carcinogen by ACGIH, IARC, NTP, or CA Prop 65.

CAS# 25322-68-3: Not listed as a carcinogen by ACGIH, IARC, NTP, or CA Prop 65.

Epidemiology:

No information found

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Teratogenicity:

No information found

Reproductive:

No information found

Mutagenicity:

No information found

Neurotoxicity:

No information found

Other:

See actual entry in RTECS for complete information.

Section 12 - Ecological Information

Ecotoxicity:

Cas# 67-63-0:

LC50 (96Hr.) fathead minnow = 94900-10400 mg/L; Flow-through conditions.

LC50 (96Hr.) fathead minnow = 61200-65500 mg/L; Flow-through.

Environmental:

TERRESTRIAL FATE: When spilled on soil, isopropanol will both evaporate quickly and leach into the ground due to its high vapor pressure and low adsorption to soil. Degradation in soil and groundwater has not been determined. If soil degradation is not rapid, it is apt to leach into the groundwater.

AQUATIC FATE: When released into water, isopropyl alcohol will volatilize (estimated half-life approximately 5.4 days) and may biodegrade.

Physical:

ATMOSPHERIC FATE: When released into the atmosphere, isopropanol will photodegrade with an estimated half-life ranging from one to several days. Due to its solubility in water, rainout may be significant.

Other:

No information found

Section 13 - Disposal Considerations

Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. US EPA guidelines for the classification determination are listed in 40 CFR Part 261.3. Additionally, waste generators must consult state and local hazardous waste regulations to ensure complete and accurate classification.

RCRA P Series Wastes

None of the components are on this list.

RCRA U Series Wastes

CAS# 67-64-1: waste number U002 (Ignitable waste).

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Section 14 - Transport Information

US DOT

Proper Shipping Name: FLAMMABLE LIQUID, N.O.S. (Isopropanol, Acetone)
Hazard Class: 3
UN Number: UN1993
Packing Group: II

USA RQ: CAS# 67-64-1: 5000 lb final RQ; 2270 kg final RQ

Canadian TDG

FLAMMABLE LIQUID, N.O.S. (Isopropanol, Acetone)
3
UN1993
II

Section 15 - Regulatory Information

US Federal

TSCA

CAS# 67-63-0 is listed on the TSCA Inventory.
CAS# 67-64-1 is listed on the TSCA Inventory.
CAS# 7732-18-5 is listed on the TSCA Inventory.
CAS# 25322-68-3 is listed on the TSCA Inventory.

Health and Safety Reporting List

CAS# 67-63-0: Effective 12/15/86, Sunset 12/15/96

Chemical Test Rules

CAS# 67-63-0: 40 CFR 799.2325
CAS# 67-64-1: 40 CFR 799.5000

TSCA Section 12b

None of the components are on this list.

TSCA Significant New Use Rule (SNUR)

None of the components are on this list.

CERCLA Hazardous Substances and corresponding RQs

CAS# 67-64-1: 5000 lb final RQ; 2270 kg final RQ

SARA Section 302 Extremely Hazardous Substances

None of the components are on this list.

SARA Hazard Categories

CAS# 67-63-0: immediate, delayed, fire.
CAS# 67-64-1: immediate, fire.
CAS# 25322-68-3: Not controlled.

SARA Section 313

This material contains Isopropyl alcohol (CAS# 67-63-0, 74-76%), which is subject to the reporting requirements of Section 313 of SARA Title III and 40 CFR Part 372.

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Clean Air Act - Hazardous Air Pollutants (HAPs)

None of the components are on this list.

Clean Air Act - Class 1 Ozone Depletors

None of the components are on this list.

Clean Air Act - Class 2 Ozone Depletors

None of the components are on this list.

Clean Water Act - Hazardous Substances

None of the components are on this list.

Clean Water Act - Priority Pollutants

None of the components are on this list.

Clean Water Act - Toxic Pollutants

None of the components are on this list.

OSHA - Highly Hazardous

None of the components are on this list.

OSHA - Specifically Regulated Chemicals

None of the components are on this list.

US State

State Right to Know

Isopropyl alcohol can be found on the following state Right-to-Know lists: California, New Jersey, Pennsylvania, Minnesota, Massachusetts.

Acetone can be found on the following state Right-to-Know lists: California, New Jersey, Pennsylvania, Minnesota, Massachusetts.

Polyethylene glycol can be found on the following state Right-to-Know lists: Minnesota.

California Prop 65

None of the components are on this list.

California No Significant Risk Level

None of the components are on this list.

None of the components are on this list.

None of the components are on this list.

None of the components are on this list.

European/International Regulations

European Labelling in Accordance with EC Directives:

Hazard Symbols: F XI

Risk Phrases: R 11 Highly flammable.

R 36 Irritating to eyes.

R 66 Repeated exposure may cause skin dryness or cracking.

R 67 Vapours may cause drowsiness and dizziness.

Safety Phrases: S 7 Keep container tightly closed.

S 9 Keep container in a well-ventilated place.

S 16 Keep away from sources of ignition - No smoking.

S 24/25 Avoid contact with skin and eyes.

S 26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

WGK (Water Danger/Protection)

No information found

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United Kingdom Occupational Exposure Limits

No information found

United Kingdom Maximum Exposure Limits

No information found

Canadian DSL/NDSL

CAS# 67-63-0 is listed on Canada's DSL List.

CAS# 67-64-1 is listed on Canada's DSL List.

CAS# 7732-18-5 is listed on Canada's DSL List.

CAS# 25322-68-3 is listed on Canada's DSL List.

Canadian WHMIS Classifications

This product has a WHMIS classification of D2B, B2.

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all of the information required by those regulations.

Canadian Ingredient Disclosure List

CAS# 67-63-0 is listed on the Canadian Ingredient Disclosure List.

CAS# 67-64-1 is listed on the Canadian Ingredient Disclosure List.

Section 16 - Other Information

Color information has been

MSDS Creation Date: December 13, 2007

Revision Date: December 13, 2007

Revisions were made in Sections:

9, 14

This MSDS is intended for review and guidance in the receipt, storage, handling, use and disposal of product purchased from us, and for no other purpose. Use this product only as directed and in accordance with applicable instructions and warnings provided with the product. Please consult your institution's policies regarding use of this product. If you have obtained this MSDS other than in connection with the supply of this product from us, this MSDS should be consulted for general information only, and should not be relied upon for any purpose. As with the use of all hazardous materials, you should in all instances follow the guidance of the MSDS provided or available with the specific product purchased.