

Safety Data Sheet

according to the federal final rule of hazard communication revised on 2012 (HazCom 2012)
Issue date: 09/27/2022 Version: 01

SECTION 1: Identification

1.1. Identification

Product form : Mixture
Product name : Nuclear Fast Red
Product code : H-3403

1.2. Recommended use and restrictions on use

Use of the substance/mixture : Laboratory chemicals

1.3. Supplier

Vector Laboratories, Inc.
6737 Mowry Ave
Newark, CA 94560
U.S.A
T (650) 697-3600 - F (650) 697-0339
customerservice@vectorlabs.com

1.4. Emergency telephone number

Emergency number : US only (800) 227-6666 or outside of the US +1 (650) 697-3600 (7:15 AM - 5:00 PM PST)

SECTION 2: Hazard(s) identification

2.1. Classification of the substance or mixture

GHS US classification

Flammable liquids Category 3

Flammable liquid and vapor

2.2. GHS Label elements, including precautionary statements

GHS US labeling

Hazard pictograms (GHS US) :



Signal word (GHS US) :

Warning

Hazard statements (GHS US) :

Flammable liquid and vapor

Precautionary statements (GHS US) :

Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
Keep container tightly closed.
Ground/Bond container and receiving equipment.
Use explosion-proof electrical equipment.
Use only non-sparking tools.
Take precautionary measures against static discharge.
Wear protective gloves.
If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
In case of fire: Use carbon dioxide (CO₂), D-powder, extinguishing powder, foam, alcohol resistant foam to extinguish.
Store in a well-ventilated place. Keep cool.
Dispose of contents/container to a licensed hazardous-waste disposal contractor or collection site except for empty clean containers which can be disposed of as non-hazardous waste.

2.3. Other hazards which do not result in classification

No additional information available

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2.4. Unknown acute toxicity (GHS US)

Not applicable

SECTION 3: Composition/Information on ingredients

3.1. Substances

Not applicable

3.2. Mixtures

Name	Product identifier	%
ethanol, ethyl alcohol	CAS-No.: 64-17-5	2.5 – 10

The specific chemical component identities and/or the exact component percentages of this material may be withheld as trade secrets.

This information is made available to health professionals, employees, and designated representatives in accordance with the applicable provisions of 29 CFR 1910.1200 (I)(1). Trace ingredients (if any) are present in < 1% concentration, (< 0.1% for potential carcinogens, mutagen, and reproductive toxicant, respiratory tract and skin sensitizers in addition to oral/ inhalation acute toxicant in category 1 and 2). None of the trace ingredients contribute significant additional hazards at the concentrations that may be present in this product. All pertinent hazard information has been provided in this document, per the requirements of the Federal Occupational Safety and Health Administration Standard (29 CFR 1910.1200), U.S. State equivalents.

SECTION 4: First-aid measures

4.1. Description of first aid measures

First-aid measures after inhalation	: Remove person to fresh air and keep comfortable for breathing.
First-aid measures after skin contact	: Rinse skin with water/shower. Remove/Take off immediately all contaminated clothing.
First-aid measures after eye contact	: Rinse eyes with water as a precaution.
First-aid measures after ingestion	: Call a poison center/doctor/physician if you feel unwell.

4.2. Most important symptoms and effects (acute and delayed)

No additional information available

4.3. Immediate medical attention and special treatment, if necessary

Treat symptomatically.

SECTION 5: Fire-fighting measures

5.1. Suitable (and unsuitable) extinguishing media

Suitable extinguishing media : Water spray. Dry powder. Foam. Carbon dioxide.

5.2. Specific hazards arising from the chemical

Fire hazard	: Flammable liquid and vapor.
Hazardous decomposition products in case of fire	: Toxic fumes may be released.

5.3. Special protective equipment and precautions for fire-fighters

Protection during firefighting : Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

Emergency procedures : Ventilate spillage area. No open flames, no sparks, and no smoking.

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6.1.2. For emergency responders

Protective equipment : Do not attempt to take action without suitable protective equipment. For further information refer to section 8: "Exposure controls/personal protection".

6.2. Environmental precautions

Avoid release to the environment.

6.3. Methods and material for containment and cleaning up

Methods for cleaning up : Take up liquid spill into absorbent material. Notify authorities if product enters sewers or public waters.

Other information : Dispose of materials or solid residues at an authorized site.

6.4. Reference to other sections

For further information refer to section 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling : Ensure good ventilation of the work station. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Ground/bond container and receiving equipment. Use only non-sparking tools. Take precautionary measures against static discharge. Flammable vapors may accumulate in the container. Use explosion-proof equipment. Wear personal protective equipment.

Hygiene measures : Do not eat, drink or smoke when using this product. Always wash hands after handling the product.

7.2. Conditions for safe storage, including any incompatibilities

Technical measures : Ground/bond container and receiving equipment.

Storage conditions : Store in a well-ventilated place. Keep cool. Keep container tightly closed.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Nuclear Fast Red	
No additional information available	
ethanol, ethyl alcohol (64-17-5)	
USA - ACGIH - Occupational Exposure Limits	
Local name	Ethanol
ACGIH OEL STEL [ppm]	1000 ppm
Remark (ACGIH)	TLV® Basis: URT irr. Notations: A3 (Confirmed Animal Carcinogen with Unknown Relevance to Humans)
Regulatory reference	ACGIH 2022
USA - OSHA - Occupational Exposure Limits	
Local name	Ethyl alcohol (Ethanol)
OSHA PEL TWA [1]	1900 mg/m ³
OSHA PEL TWA [2]	1000 ppm
Regulatory reference (US-OSHA)	OSHA Annotated Table Z-1

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8.2. Appropriate engineering controls

Appropriate engineering controls : Ensure good ventilation of the work station.
Environmental exposure controls : Avoid release to the environment.

8.3. Individual protection measures/Personal protective equipment

Hand protection:
Protective gloves
Eye protection:
Safety glasses
Skin and body protection:
Wear suitable protective clothing
Respiratory protection:
In case of insufficient ventilation, wear suitable respiratory equipment

Personal protective equipment symbol(s):



SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state : Liquid
Color : Red
Odor : No data available
Odor threshold : No data available
pH : No data available
Melting point : Not applicable
Freezing point : No data available
Boiling point : No data available
Flash point : ≥ 120 °F (estimated value)
Relative evaporation rate (butyl acetate=1) : No data available
Flammability (solid, gas) : Not applicable.
Vapor pressure : No data available
Relative vapor density at 20 °C : No data available
Relative density : No data available
Solubility : No data available
Partition coefficient n-octanol/water (Log Pow) : No data available
Auto-ignition temperature : No data available
Decomposition temperature : No data available
Viscosity, kinematic : No data available
Viscosity, dynamic : No data available
Explosion limits : No data available
Explosive properties : No data available
Oxidizing properties : No data available

9.2. Other information

No additional information available

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SECTION 10: Stability and reactivity

10.1. Reactivity

Flammable liquid and vapor.

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use.

10.4. Conditions to avoid

Avoid contact with hot surfaces. Heat. No flames, no sparks. Eliminate all sources of ignition.

10.5. Incompatible materials

No additional information available

10.6. Hazardous decomposition products

Under normal conditions of storage and use, hazardous decomposition products should not be produced.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity (oral) : Not classified

Acute toxicity (dermal) : Not classified

Acute toxicity (inhalation) : Not classified

ethanol, ethyl alcohol (64-17-5)

LD50 oral rat	15010 mg/kg body weight Animal: rat, Animal sex: female, Guideline: OECD Guideline 401 (Acute Oral Toxicity), 95% CL: 14450 - 15560
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ATE US (oral)	8300 mg/kg body weight
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Skin corrosion/irritation : Not classified

Serious eye damage/irritation : Not classified.

Respiratory or skin sensitization : Not classified

Germ cell mutagenicity : Not classified

Carcinogenicity : Not classified

ethanol, ethyl alcohol (64-17-5)

IARC group	1 - Carcinogenic to humans
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Reproductive toxicity : Not classified

STOT-single exposure : Not classified

STOT-repeated exposure : Not classified

ethanol, ethyl alcohol (64-17-5)

LOAEL (oral, rat, 90 days)	3200 mg/kg body weight Animal: rat, Animal sex: male, Guideline: OECD Guideline 408 (Repeated Dose 90-Day Oral Toxicity Study in Rodents)
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NOAEL (oral, rat, 90 days)	1730 mg/kg body weight Animal: rat, Animal sex: male, Guideline: OECD Guideline 408 (Repeated Dose 90-Day Oral Toxicity Study in Rodents), Remarks on results: other:
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NOAEL (subchronic, oral, animal/male, 90 days)	< 9700 mg/kg body weight Animal: mouse, Animal sex: male, Guideline: EPA OPPTS 870.3100 (90-Day Oral Toxicity in Rodents)
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NOAEL (subchronic, oral, animal/female, 90 days)	> 9400 mg/kg body weight Animal: mouse, Animal sex: female, Guideline: EPA OPPTS 870.3100 (90-Day Oral Toxicity in Rodents)
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Aspiration hazard : Not classified
Viscosity, kinematic : No data available

SECTION 12: Ecological information

12.1. Toxicity

Ecology - general : The product is not considered harmful to aquatic organisms or to cause long-term adverse effects in the environment.

ethanol, ethyl alcohol (64-17-5)	
LC50 - Fish [1]	14.2 g/l Test organisms (species): Pimephales promelas
EC50 - Crustacea [1]	> 10000 mg/l Test organisms (species): Daphnia magna
ErC50 algae	275 mg/l Source: ECHA
NOEC (chronic)	9.6 mg/l Test organisms (species): Daphnia magna Duration: '9 d'

12.2. Persistence and degradability

No additional information available

12.3. Bioaccumulative potential

ethanol, ethyl alcohol (64-17-5)	
Partition coefficient n-octanol/water (Log Pow)	-0.32 Source: ICSC

12.4. Mobility in soil

No additional information available

12.5. Other adverse effects

No additional information available

SECTION 13: Disposal considerations

13.1. Disposal methods

Waste treatment methods : Dispose of contents/container in accordance with licensed collector's sorting instructions.
Additional information : Flammable vapors may accumulate in the container.

SECTION 14: Transport information

In accordance with DOT / IMDG / IATA

14.1. UN number

DOT NA No : UN1993
UN-No. (IMDG) : 1993
UN-No. (IATA) : 1993

14.2. UN proper shipping name

Proper Shipping Name (DOT) : Flammable liquids, n.o.s. (CONTAINS : ethanol, ethyl alcohol)
Proper Shipping Name (IMDG) : FLAMMABLE LIQUID, N.O.S. (CONTAINS : ethanol; ethyl alcohol)
Proper Shipping Name (IATA) : Flammable liquid, n.o.s. (CONTAINS : ethanol; ethyl alcohol)

14.3. Transport hazard class(es)

DOT

Transport hazard class(es) (DOT) : 3
Hazard labels (DOT) : 3

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IMDG

Transport hazard class(es) (IMDG) : 3
Hazard labels (IMDG) : 3



IATA

Transport hazard class(es) (IATA) : 3
Hazard labels (IATA) : 3



14.4. Packing group

Packing group (DOT) : III
Packing group (IMDG) : III
Packing group (IATA) : III

14.5. Environmental hazards

Other information : No supplementary information available.

14.6. Special precautions for user

DOT

UN-No.(DOT) : UN1993
DOT Special Provisions (49 CFR 172.102) : B1 - If the material has a flash point at or above 38 C (100 F) and below 93 C (200 F), then the bulk packaging requirements of 173.241 of this subchapter are applicable. If the material has a flash point of less than 38 C (100 F), then the bulk packaging requirements of 173.242 of this subchapter are applicable.
B52 - Notwithstanding the provisions of 173.24b of this subchapter, non-reclosing pressure relief devices are authorized on DOT 57 portable tanks.
IB3 - Authorized IBCs: Metal (31A, 31B and 31N); Rigid plastics (31H1 and 31H2); Composite (31HZ1 and 31HA2, 31HB2, 31HN2, 31HD2 and 31HH2). Additional Requirement: Only liquids with a vapor pressure less than or equal to 110 kPa at 50 C (1.1 bar at 122 F), or 130 kPa at 55 C (1.3 bar at 131 F) are authorized, except for UN2672 (also see Special Provision IP8 in Table 2 for UN2672).
T4 - 2.65 178.274(d)(2) Normal..... 178.275(d)(3)
TP1 - The maximum degree of filling must not exceed the degree of filling determined by the following: Degree of filling = $97 / 1 + a (tr - tf)$ Where: tr is the maximum mean bulk temperature during transport, and tf is the temperature in degrees celsius of the liquid during filling.
TP29 - A portable tank having a minimum test pressure of 1.5 bar (150.0 kPa) may be used provided the calculated test pressure is 1.5 bar or less based on the MAWP of the hazardous materials, as defined in 178.275 of this subchapter, where the test pressure is 1.5 times the MAWP.
DOT Packaging Exceptions (49 CFR 173.xxx) : 150
DOT Packaging Non Bulk (49 CFR 173.xxx) : 203
DOT Packaging Bulk (49 CFR 173.xxx) : 242

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DOT Quantity Limitations Passenger aircraft/rail (49 CFR 173.27) : 60 L
DOT Quantity Limitations Cargo aircraft only (49 CFR 175.75) : 220 L
DOT Vessel Stowage Location : A - The material may be stowed "on deck" or "under deck" on a cargo vessel and on a passenger vessel.

IMDG

Special provision (IMDG) : 223, 274, 955
Limited quantities (IMDG) : 5 L
Excepted quantities (IMDG) : E1
Packing instructions (IMDG) : LP01, P001
IBC packing instructions (IMDG) : IBC03
Tank instructions (IMDG) : T4
Tank special provisions (IMDG) : TP1, TP29
EmS-No. (Fire) : F-E - FIRE SCHEDULE Echo - NON-WATER-REACTIVE FLAMMABLE LIQUIDS
EmS-No. (Spillage) : S-E - SPILLAGE SCHEDULE Echo - FLAMMABLE LIQUIDS, FLOATING ON WATER
Stowage category (IMDG) : A

IATA

PCA Excepted quantities (IATA) : E1
PCA Limited quantities (IATA) : Y344
PCA limited quantity max net quantity (IATA) : 10L
PCA packing instructions (IATA) : 355
PCA max net quantity (IATA) : 60L
CAO packing instructions (IATA) : 366
CAO max net quantity (IATA) : 220L
Special provision (IATA) : A3
ERG code (IATA) : 3L

14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable

SECTION 15: Regulatory information

15.1. US Federal regulations

All components of this product are present and listed as Active on the United States Environmental Protection Agency Toxic Substances Control Act (TSCA) inventory

15.2. International regulations

ethanol, ethyl alcohol (64-17-5)

Listed on IARC (International Agency for Research on Cancer)

15.3. US State regulations

California Proposition 65 - This product does not contain any substances known to the state of California to cause cancer, developmental and/or reproductive harm

Component	State or local regulations
ethanol, ethyl alcohol(64-17-5)	U.S. - Massachusetts - Right To Know List; U.S. - New Jersey - Right to Know Hazardous Substance List; U.S. - New York City - Right to Know Hazardous Substances List; U.S. - Pennsylvania - RTK (Right to Know) List

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SECTION 16: Other information

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Custom_SDS_USA_VECTOR

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.