

Nuclear Fast Red

Safety Data Sheet

according to 29 CFR § 1910.1200, Hazard Communication Standard (HCS)
Issue date: 2/13/2025 Revision date: 4/3/2025 Supersedes: 2/13/2025 Version: 1.1

SECTION 1 Identification

1.1. Product identifier

Product form : Mixture
Product name : Nuclear Fast Red
Product code : 3374 - all sizes

1.2. Other means of identification

Synonyms : Nuclear Fast Red

1.3. Recommended use of the chemical and restrictions on use

Use of the substance/mixture : For laboratory and manufacturing use only
Restrictions on use : Not for food, drug or household use

1.4. Supplier's details

Astral Diagnostics
Ethos Biosciences, Inc.
2070 Center Square Road
Logan Township, New Jersey 08085
United States
T +1-856-224-0900; +1-800-441-0366 Technical Service; Monday-Friday: 8:00 AM-5:00 PM, Eastern US Time
www.ethosbiosciences.com

1.5. Emergency phone number

Emergency number : 800-424-9300 CHEMTREC (USA) -- 24 Hours/Day, 7 Days/Week

SECTION 2 Hazard Identification

2.1. Classification of the substance or mixture

GHS US classification

Skin corrosion/irritation, Category 1B	H314	Causes severe skin burns and eye damage.
Serious eye damage/eye irritation, Category 2B	H320	Causes eye irritation.
Full text of H statements : see section 16		

2.2. Label elements

GHS US labeling

Hazard pictograms (GHS US) :



Signal word (GHS US) : Danger
Hazard statements (GHS US) : H314 - Causes severe skin burns and eye damage
H320 - Causes eye irritation
Precautionary statements (GHS US) : P260 - Do not breathe dusts or mists.
P264 - Wash hands, forearms and face thoroughly after handling.
P280 - Wear protective gloves, protective clothing, eye protection, face protection, and hearing protection.
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/shower.

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P304+P340 - If inhaled: Remove person to fresh air and keep comfortable for breathing.
P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P310 - Immediately call a poison center or doctor.
P321 - Specific treatment (see supplemental first aid instruction on this label).
P337+P313 - If eye irritation persists: Get medical advice or attention.
P363 - Take off immediately all contaminated clothing and wash it before reuse.
P405 - Store locked up.
P501 - Dispose of contents and/or container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulations.

2.3. Hazards associated with known or reasonably anticipated uses

No additional information available

2.4. Hazards not otherwise classified

No additional information available

2.5. Unknown acute toxicity

No additional information available

SECTION 3 Composition/information on ingredients

3.1. Substances

Not applicable

3.2. Mixtures

Name	Product identifier	Conc.	GHS US classification
water	CAS-No.: 7732-18-5	≥ 92	Not classified
aluminum sulfate	CAS-No.: 10043-01-3	4 – 6	Not classified
5-Methyl-2-isopropylphenol	CAS-No.: 89-83-8	< 1	Acute Tox. 4 (Oral), H302 Eye Dam. 1, H318
Nuclear Fast Red	CAS-No.: 6409-77-4	< 1	Skin Irrit. 2, H315 Eye Irrit. 2, H319

Full text of hazard classes and H-statements : see section 16

SECTION 4 First aid measures

4.1. Description of necessary first-aid measures

First-aid measures general : Call a physician immediately.
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. Call a physician immediately.
First-aid measures after eye contact : Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Call a physician immediately.
First-aid measures after ingestion : Rinse mouth. Do not induce vomiting. Call a physician immediately.

4.2. Most important symptoms/effects, acute and delayed

Symptoms/effects after inhalation : None under normal conditions.
Symptoms/effects after skin contact : Burns.
Symptoms/effects after eye contact : Serious damage to eyes. Mild eye irritation.

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Symptoms/effects after ingestion : Burns.

4.3. Indication of immediate medical attention and special treatment needed, if necessary

Other medical advice or treatment : Treat symptomatically.

SECTION 5: Fire-fighting measures

5.1. Suitable (and unsuitable) extinguishing media

Suitable extinguishing media : Water spray. Dry powder. Foam. Carbon dioxide.
Unsuitable extinguishing media : Do not use a heavy water stream.

5.2. Specific hazards arising from the chemical

Fire hazard : No fire hazard.
Explosion hazard : No direct explosion hazard.
Hazardous decomposition products in case of fire : Toxic fumes may be released.

5.3. Special protective equipment and precautions for fire-fighters

Firefighting instructions : Fight fire from safe distance and protected location. Do not enter fire area without proper protective equipment, including respiratory protection.
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

General measures : Stop leak if safe to do so. Notify authorities if product enters sewers or public waters. Absorb spillage to prevent material-damage.

For non-emergency personnel

Protective equipment : Wear recommended personal protective equipment.
Emergency procedures : Ventilate spillage area. Avoid contact with skin and eyes. Do not breathe dust/fume/gas/mist/vapors/spray.

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".
Emergency procedures : Evacuate unnecessary personnel. Stop leak if safe to do so.
Environmental precautions : Avoid release to the environment.

6.2. Methods and materials for containment and cleaning up

For containment : Absorb spilled material with sand or earth. Contain any spills with dikes or absorbents to prevent migration and entry into sewers or streams. Stop leak, if possible without risk.
Methods for cleaning up : Take up liquid spill into absorbent material.
Other information : Dispose of materials or solid residues at an authorized site.

For further information refer to section 13

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SECTION 7 Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling	: Ensure good ventilation of the work station. Avoid contact with skin and eyes. Do not breathe dust/fume/gas/mist/vapors/spray. Wear personal protective equipment.
Hygiene measures	: Wash contaminated clothing before reuse. Do not eat, drink or smoke when using this product. Always wash hands after handling the product.
Additional hazards when processed	: Not expected to present a significant hazard under anticipated conditions of normal use.

7.2. Conditions for safe storage, including incompatibilities

Technical measures	: Keep in a cool, well-ventilated place away from heat.
Storage conditions	: Store locked up.
Packaging materials	: Store always product in container of same material as original container.

SECTION 8 Exposure controls/personal protection

8.1. Control parameters

No additional information available

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, such as personal protective equipment

Personal protective equipment:

Wear recommended 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. Basic physical and chemical properties

Physical state	: Liquid
Color	: red
Odor	: No data available

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Odor threshold	: No data available
pH	: 2 (≥ 4)
Melting point	: Not applicable
Freezing point	: No data available
Boiling point	: No data available
Flash point	: 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	: Water: Solubility in water of component(s) of the mixture : • 5-Methyl-2-isopropylphenol: 0.08 g/100ml • Nuclear Fast Red:
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
Explosion limits	: No data available
Particle characteristics	: No data available

5-Methyl-2-isopropylphenol

Boiling point	233 °C
Flash point	102 °C
Auto-ignition temperature	285 °C (T3)
Vapor pressure	< 0.1 hPa (20 °C)
Vapor pressure at 50°C	2.5 hPa

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Flash point	Not applicable
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9.2. Data relevant with regard to physical hazard classes (supplemental)

No additional information available

SECTION 10 Stability and reactivity

10.1. Reactivity

The product is non-reactive under normal conditions of use, storage and transport.

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

None under recommended storage and handling conditions (see section 7).

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.

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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

5-Methyl-2-isopropylphenol (89-83-8)

ATE US (oral)	500 mg/kg body weight
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Skin corrosion/irritation : Causes severe skin burns.
pH: 2 (≥ 4)

5-Methyl-2-isopropylphenol (89-83-8)

pH	5 – 7 (0.08 %)
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Serious eye damage/irritation : Causes eye irritation.
pH: 2 (≥ 4)

5-Methyl-2-isopropylphenol (89-83-8)

pH	5 – 7 (0.08 %)
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Respiratory or skin sensitization : Not classified

Germ cell mutagenicity : Not classified

Carcinogenicity : Not classified

Reproductive toxicity : Not classified

STOT-single exposure : Not classified

STOT-repeated exposure : Not classified

Aspiration hazard : Not classified

Symptoms/effects after inhalation : None under normal conditions.

Symptoms/effects after skin contact : Burns.

Symptoms/effects after eye contact : Serious damage to eyes. Mild eye irritation.

Symptoms/effects after ingestion : Burns.

SECTION 12 Ecological information

12.1. Ecotoxicity

Ecology - general : Before neutralisation, the product may represent a danger to aquatic organisms.

Hazardous to the aquatic environment, short-term (acute) : Not classified

Hazardous to the aquatic environment, long-term (chronic) : Not classified

12.2. Persistence and degradability

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Persistence and degradability	Not rapidly degradable
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aluminum sulfate (10043-01-3)

Persistence and degradability	Not rapidly degradable
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5-Methyl-2-isopropylphenol (89-83-8)	
Persistence and degradability	Readily biodegradable in water.
Chemical oxygen demand (COD)	2.69 g O ₂ /g substance
ThOD	2.76 g O ₂ /g substance
Nuclear Fast Red (6409-77-4)	
Persistence and degradability	Biodegradability in water: no data available.
water (7732-18-5)	
Persistence and degradability	Not rapidly degradable

12.3. Bioaccumulative potential

5-Methyl-2-isopropylphenol (89-83-8)	
Partition coefficient n-octanol/water (Log Pow)	3.3 – 3.4
Nuclear Fast Red (6409-77-4)	
Bioaccumulative potential	No bioaccumulation data available.

12.4. Mobility in soil

No additional information available

12.5. Other adverse effects

Ozone	: Not classified
Fluorinated greenhouse gases	: No

SECTION 13 Disposal considerations

Regional waste regulation	: Disposal must be done according to official regulations.
Waste treatment methods	: Dispose of contents/container in accordance with licensed collector's sorting instructions.
Sewage disposal recommendations	: Disposal must be done according to official regulations.
Product/Packaging disposal recommendations	: Disposal must be done according to official regulations.
Additional information	: Do not re-use empty containers.

SECTION 14 Transport information

In accordance with DOT / TDG / IMDG / IATA

14.1. UN number

Not regulated for transport

14.2. UN Proper Shipping Name

Proper Shipping Name (DOT)	: Not regulated
Proper Shipping Name (TDG)	: Not regulated
Proper Shipping Name (IMDG)	: Not regulated
Proper Shipping Name (IATA)	: Not regulated

14.3. Transport hazard class(es)

DOT

Transport hazard class(es) (DOT)	: Not regulated
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TDG

Transport hazard class(es) (TDG) : Not regulated

IMDG

Transport hazard class(es) (IMDG) : Not regulated

IATA

Transport hazard class(es) (IATA) : Not regulated

14.4. Packing group

Packing group (DOT) : Not regulated

Packing group (TDG) : Not regulated

Packing group (IMDG) : Not regulated

Packing group (IATA) : Not regulated

14.5. Environmental hazards

Other information : No supplementary information available.

14.6. Transport in bulk

Not applicable

14.7. Special precautions for user

DOT

Not regulated

TDG

Not regulated

IMDG

Not regulated

IATA

Not regulated

SECTION 15 Regulatory information

15.1. 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, except for:

aluminum sulfate	CAS-No. 10043-01-3	4 – 6%
Nuclear Fast Red	CAS-No. 6409-77-4	< 1%

This product or mixture is not known to contain a toxic chemical or chemicals in excess of the applicable de minimis concentration as specified in 40 CFR §372.38(a) subject to the reporting requirements of section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR Part 372.

15.2. International regulations

CANADA

5-Methyl-2-isopropylphenol (89-83-8)

Listed on the Canadian DSL (Domestic Substances List)

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Nuclear Fast Red (6409-77-4)

Listed on the Canadian DSL (Domestic Substances List)

water (7732-18-5)

Listed on the Canadian DSL (Domestic Substances List)

EU-Regulations

No additional information available

National regulations

5-Methyl-2-isopropylphenol (89-83-8)

Listed on INSQ (Mexican National Inventory of Chemical Substances)

water (7732-18-5)

Listed on INSQ (Mexican National Inventory of Chemical Substances)

15.3. 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

SECTION 16 Other information

according to 29 CFR § 1910.1200, Hazard Communication Standard (HCS)

Revision date : 4/3/2025

Issue date : 2/13/2025

Full text of hazard classes and H-statements

H302	Harmful if swallowed
H314	Causes severe skin burns and eye damage
H315	Causes skin irritation
H318	Causes serious eye damage
H319	Causes serious eye irritation
H320	Causes eye irritation

NFPA health hazard

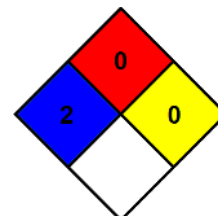
: 2 - Materials that, under emergency conditions, can cause temporary incapacitation or residual injury.

NFPA fire hazard

: 0 - Materials that will not burn under typical fire conditions, including intrinsically noncombustible materials such as concrete, stone, and sand.

NFPA reactivity

: 0 - Material that in themselves are normally stable, even under fire conditions.



Safety Data Sheet (SDS), USA

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