SAFETY DATA SHEET

Section 1 – Identification

Product Name	Nuclear Factor Fixation and Permeabilization Buffer Set.
Recommended Use	Reagents for biochemical applications, industrial, commercial.
Company	BioLegend
Street Address	9727 Pacific Heights Blvd
City, State, Zip, Country	San Diego, CA 92121
Phone	858-455-9588
Emergency Number	In case of a chemical emergency, spill, fire, or exposure, +1-858-455-9588 (7:00AM – 5:00PM PDT, M-F)

Section 2 – Hazards Identification

2.1 Hazard Classification

Dermal Sensitization, Category 1
Eye Damage, Category 1
Carcinogen, Category 2

2.2 GHS Label elements, including precautionary statements

Pictogram

Signal Word Danger

Hazard Statement

H317	May cause an allergic skin reaction.
H318	Causes serious eye irritation.
H335	May cause respiratory irritation.
H351	Suspected of causing cancer.

Precautionary Statement (Prevention)

P280	Wear protective gloves/protective clothing/eye protection/face protection.
P262	Do not get in eyes, on skin, or on clothing.
P261	Avoid breathing dust/fume/gas/mist/vapors/spray.
P271	Use in a well-ventilated area.
P264	Wash thoroughly after handling.

Precautionary Statements (Response)

P302+P353+P361+P363; P333+P313	If on skin: Immediately wash skin with soap and copious amounts of water. Remove/Take off immediately all contaminated clothing. Wash contaminated clothing before reuse. If skin irritation or a rash occurs: Get medical advice/attention.
P305+P351+P338	If in eyes: Rinse eyes with water for at least 15 minutes. Remove contacts if present and easy to do. Continue rinsing.
P304+P340	If inhaled: Move to fresh air and keep at rest in a position comfortable for breathing.
P301+P330+P331	If swallowed: Rinse mouth. Do NOT induce vomiting.
P308+P311	If exposed or concerned: Call a poison center or doctor/physician.

Precautionary Statements (Storage)

P401	Store from 2-8°C.
P403	Store in a well ventilated place.

Precautionary Statements (Disposal)

P501	Dispose of contents/container to hazardous or special waste collection point.

Section 3 – Composition/Information on Ingredients

Component	CAS	EINECS	Concentration
Paraformaldehyde	30525-89-4	unlisted	4%
Sodium Azide	26628-22-8	247-852-1	0.09% (w/v)

Section 4 – First Aid Measures

4.1 Description of first aid measures

After inhalation: Move to fresh air. If breathing is difficult seek medical attention.

After skin contact: Wash with soap and copious amounts of water. Remove/Take off immediately all contaminated clothing. Wash contaminated clothing before reuse. If skin irritation or a rash occurs: Seek medical attention.

After eye contact: Immediately flush eyes with plenty of water for at least 15 minutes, occasionally lifting the eye lids to ensure thorough rinsing. Seek medical attention.

After swallowing: Wash mouth out with water if person is conscious. Do NOT induce vomiting. Seek medical attention.

Symptoms: Contact may cause skin irritation. Contact may cause eye irritation.

Section 5 – Fire-Fighting Measures

5.1 Suitable extinguishing agents: Extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.

5.2 Special hazards caused by the material, its products of combustion or resulting gases: NFPA Class II Combustible Liquid. Dangerous decomposition products include poisonous gases or vapors; formaldehyde. Vapors can form explosive mixture with air. They may also travel to source of ignition. Containers exposed to fire/heat can explode due to pressure. Vapors are sensitive to static electrical discharge.

5.3 Special protective equipment and precautions for fire-fighters: Wear protective clothing and self-contained breathing apparatus for fire response. Remove containers out of range of fire, if can be done without risk. If not, use water spray to keep containers cool. Any contaminated equipment should be rinsed thoroughly with water if exposed.

Hazardous combustion materials: No data available.

Section 6 – Accidental Release Measures

6.1 Personal precautions, protective equipment, and emergency procedures*:* Small spills can often be handled by personnel with chemical training. For large spills, contact emergency personnel immediately. Evacuate and ventilate area. Use protective clothing, gloves and equipment. Avoid formation of dust/vapor. Avoid inhalation or other contact. Keep unnecessary persons away.

6.2 Environment precautions: Prevent entry into waterways, drains, soil, and sewers.

6.3 Measures for cleaning/collecting: Absorb material with appropriate absorbent material and dispose in appropriate hazardous waste container.

6.4 Additional information:
See Section 7 for information on safe handling.
See Section 8 for information on personal protection equipment.
See Section 13 for disposal information.

Section 7 – Handling and Storage

7.1 Precautions for safe handling: Do not get on skin, in eyes, on clothing. Do not breathe dust/vapor. Wash thoroughly after handling. Ensure area is adequately ventilated. Toxigenic and mutagenic. See section 8 for more information.

7.2 Conditions for safe storage, including any incompatibilities: Keep container tightly-sealed. Do not store with strong oxidizing agents, bases, acids, or any water reactive materials. Store from 2-8°C.

Section 8 – Exposure controls/personal protection

8.1 Exposure Limits

Formaldehyde

OSHA PEL	0.75 ppm over an 8-hour shift and 2 ppm during any 15-minute period.

NIOSH	REL is 0.016 ppm over an 8-hour shift and 2 ppm during any 15-minute period.
ACGIH	TLV is 0.3 ppm.
IARC	Group 1 carcinogen.
NTP	Suspected carcinogen.

Sodium Azide

ACGIH	TLV is 0.29 mg/m3 Ceiling
NIOSH	REL is 0.3 mg/m3 Ceiling

8.2 Exposure Controls

Engineering Controls
Use only with adequate (local exhaust) ventilation.

Personal protective equipment

General protective and hygienic measures
Keep away from foodstuffs, beverages, and feed.
Wash hands, face, and exposed forearms/areas after handling.
Wash contaminated clothing before reusing.
Ensure eyewash stations and safety showers are in close proximity to workstation.
Breathing equipment: May use self-contained breathing apparatus; NIOSH/MSHA-approved respirator.
Protection of hands: Chemical resistant gloves.
Eye protection: Face shield (recommended) and safety goggles.
Body protection: Protective work clothing.

Section 9 – Physical and Chemical Properties

Appearance	Liquid, Colorless, clear
Odor	Pungent, fruity
Odor Threshold	No Data Available
pH	No Data Available
Melting point/freezing point	No Data Available
Boiling point	No Data Available
Flash point	No Data Available
Evaporation rate	No Data Available
Flammability	No Data Available
Upper explosion limit	No Data Available
Lower explosion limit	No Data Available
Vapor pressure	No Data Available
Vapor density	No Data Available
Relative density	No Data Available
Solubility	Soluble

Partition coefficient	No Data Available
Auto-ignition temperature	No Data Available
Decomposition temperature	No Data Available
Viscosity	No Data Available
Explosive Properties	No Data Available
Oxidizing Properties	No Data Available

Section 10 – Stability and Reactivity

10.1 Reactivity
No data available

10.2 Chemical stability
Stable under normal ambient and anticipated storage and handling conditions of temperature and pressure.

10.3 Possibility of hazardous reactions
No data available

10.4 Conditions to avoid
Avoid excessive heat.

10.5 Incompatible materials
Strong oxidizing agents, bases, acids, or any water reactive materials.

10.6 Hazardous decomposition products
Dangerous decomposition products include poisonous gases or vapors; formaldehyde.

Section 11 – Toxicological Information

Routes of Entry	Ingestion, inhalation, skin and eye contact.
Acute Toxicity	Oral LD50 (Paraformaldehyde) 800 mg/kg (rat) Oral LD50 (Sodium Azide) 27 mg/kg (rat)
Skin Corrosion/Irritation	Irritant
Serious eye damage/irritation	Irritant
Respiratory or skin sensitization	Irritant
Germ cell mutagenicity	Mutagenic effects possible from formaldehyde, the decomposition product of paraformaldehyde.
Carcinogenicity	Paraformaldehyde is a suspected carcinogen.
Reproductive toxicity	Reproductive effects possible from paraformaldehyde, the decomposition products of paraformaldehyde.
STOT-single exposure	No data available
STOT-repeated exposure	No data available
Aspiration hazard	No data available

Section 12 – Ecological Information

Environmental Toxicity	In large volumes, may be harmful to terrestrial life.
Aquatic Toxicity	In large volumes, may be harmful to aquatic life
Persistence and degradability	Formaldehyde can transfer to rain and water due to solubility. Biodegrades significantly in water within days.
Bioaccumulative potential	No Data Available
Mobility in soil	Water soluble
Results of PBT and vPvT assessment	No data available

Section 13 – Disposal Considerations

Minimize waste as much as possible.
Not a RCRA hazardous waste.
Disposal must be made according to state and federal regulations.

Contaminated packaging (recommended)
Disposal must be made according to state and federal regulations.

Cleaning agent (recommended)
If product is spilled or leaked, collect on absorbent

Section 14 – Transport Information

DOT (Domestic)

Proper shipping name Other Regulated Substances, liquid, n.o.s. (formaldehyde, 4%)

Hazard class UN3334, Class 9, Packing group III

Reportable quantity 1000 lbs

Marine pollutant No

Poison inhalation hazard No

IMDG
Not regulated.

IATA

Proper shipping name Other Regulated Substances, liquid, n.o.s. (formaldehyde, 4%)

Hazard class UN3334, Class 9, Packing group III

Section 15 – Regulatory Information

SARA Section 335 (extremely hazardous substances): Sodium azide and formaldehyde, the decomposition product of paraformaldehyde, is subject to reporting requirements.

SARA Section 313 (specific toxic chemical listing): Sodium azide and formaldehyde, the decomposition product of paraformaldehyde, is subject to reporting requirements. Acute health hazards.

TSCA (Toxic Sustances Control Act): Sodium azide and formaldehyde, the decomposition product of paraformaldehyde, is subject to reporting requirements. Acute health hazards.

Paraformaldehyde
Not listed as a carcinogen by ACGIH, IARC, NTP, or CA Prop 65.

Sodium Azide
CERCLA Reportable Quantity: 1000 lbs

Formaldehyde
CERCLA Reportable Quantity :100 lbs
California Proposition 65: Formaldehyde is a known carcinogen.

Section 16 – Other information

Revision Date: May 6th, 2013

Only trained personnel should use this material.
To the best of our knowledge, the information contained herein is accurate. However, neither BioLegend, nor any of its subsidiaries assumes any liabilities whatsoever for the accuracy or completeness of the information contained herein. Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.

Department issuing MSDS: Safety & Environment Department
Contact: Technical Service Representative