



Safety Data Sheet - Cover Page

The products listed below meet the criteria for classification as hazardous in accordance with The Globally Harmonized System of Classification and Labelling of Chemicals (GHS). Please refer to the indicated Safety Data Sheet (SDS) for information concerning hazards and appropriate protective measures. SDS for products not classified as hazardous are available on request. Visit www.cellsignal.com for additional technical information and support.

Kit No.	Product name
12581	Glucose-6-Phosphate Dehydrogenase (G6PD) Activity Assay Kit

Kit Component No.	Product name
7018	PathScan® Sandwich ELISA Lysis Buffer (1X)
3TUFUM	G6PDH Developer (100X)
K9AOUL	G6PDH Cofactor (100X)
XLXGTS	NADP+ (100X)



Cell Signaling

TECHNOLOGY®

SAFETY DATA SHEET (SDS): According to the OSHA Hazard Communication Standard 29 CFR 1910.1200

Issuing Date: 2014-02-10

Revision Date: 2014-02-11

Version: 1

SECTION 1. Identification

Product identifier

Product No. 7018
Product name PathScan® Sandwich ELISA Lysis Buffer (1X)
Other means of identification 7018M, 7018P2, 7018S

Recommended use of the chemical and restrictions on use

Identified uses This product is intended for research purposes only.
Uses advised against This product is not intended for use in diagnostic procedures or therapeutics.
This product is not intended for use in humans or animals.

Manufacturer, importer, supplier

Manufacturer address Cell Signaling Technology, Inc.
3 Trask Lane
Danvers, MA 01923
TEL: +1 978 867 2300
FAX: +1 978 867 2400
Website www.cellsignal.com
Email address support@cellsignal.com
Company phone number 978-867-2300
Emergency telephone number In case of emergency call CHEMTREC 1-800-424-9300

SECTION 2. Hazard(s) identification

Classification

This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

Serious eye damage/eye irritation	Category 2A
--	-------------

GHS Label elements, including precautionary statements



Signal Word
Warning

Hazard statement(s)

Causes serious eye irritation

Precautionary Statement(s)

Wash face, hands and any exposed skin thoroughly after handling

Wear protective gloves/protective clothing/eye protection/face protection

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
If eye irritation persists: Get medical advice/attention

Supplementary Hazard Information

Hazards not otherwise classified (HNOC) Contact with acids liberates very toxic gas

SECTION 3. Composition/information on ingredients

Chemical nature Aqueous solution of organic and inorganic compounds.

Chemical Name	CAS No.	Weight %
sodium fluoride	7681-49-4	0.1-1
tetrasodium pyrophosphate, decahydrate	13472-36-1	0.1-1
polyethylene glycol p-(1,1,3,3-tetramethylbutyl)phenylether	9002-93-1	0.5-1.5

SECTION 4. First-aid measures

Eye contact Rinse thoroughly with plenty of water for at least 15 minutes, lifting lower and upper eyelids. Consult a physician.

Skin contact Wash skin with soap and water.

Inhalation Move to fresh air.

Ingestion Call a physician immediately. Do not induce vomiting without medical advice. Never give anything by mouth to an unconscious person. If swallowed, do not induce vomiting - seek medical advice. Rinse mouth.

Most important symptoms and effects, both acute and delayed

No information or data specific to the product on this toxicological (health) effect is available.

Indication of any immediate medical attention and special treatment needed

Notes to physician Treat symptomatically.

Advice for emergency responders

General advice For further assistance, contact your local Poison Control Center.

Protection of First-aiders Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.

SECTION 5. Fire-fighting measures

Extinguishing media

Suitable Extinguishing Media Use: Dry chemical. Carbon dioxide (CO₂). Water spray. Alcohol-resistant foam.

Unsuitable Extinguishing Media CAUTION: Use of water spray when fighting fire may be inefficient.

Specific hazards arising from the chemical

No information available.

Explosion Data

Sensitivity to Mechanical Impact None.

Sensitivity to Static Discharge None.

Protective Equipment and Precautions for Firefighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

SECTION 6. Accidental release measures**Personal precautions, protective equipment and emergency procedures**

For non-emergency personnel Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak. Use personal protective equipment.

Other information No information available.

Environmental precautions

Prevent further leakage or spillage if safe to do so. Prevent product from entering drains.

Methods and material for containment and cleaning up

Methods for containment Prevent further leakage or spillage if safe to do so.

Methods for cleaning up Dam up. Soak up with inert absorbent material. Pick up and transfer to properly labeled containers.

SECTION 7. Handling and storage**Precautions for safe handling**

Use only in area provided with appropriate exhaust ventilation. Wear personal protective equipment. Prevent the formation of vapors, mists and aerosols.

Conditions for safe storage, including any incompatibilities

Technical measures/Storage conditions Keep containers tightly closed in a cool, well-ventilated place. Keep in properly labeled containers.

Packaging material No information available.

Incompatible products None known based on information supplied.

SECTION 8. Exposure controls/personal protection**Control parameters**

Chemical Name	ACGIH TLV	OSHA PEL	NIOSH REL
sodium fluoride 7681-49-4	TWA: 2.5 mg/m ³	TWA: 2.5 mg/m ³ (vacated) TWA: 2.5 mg/m ³	IDLH: 250 mg/m ³ TWA: 2.5 mg/m ³
tetrasodium pyrophosphate, decahydrate 13472-36-1	-	(vacated) TWA: 5 mg/m ³	TWA: 5 mg/m ³ (Listed as: Tetrasodium pyrophosphate)

(vacated) = Vacated limits revoked by the Court of Appeals decision in *AFL-CIO v. OSHA*, 965 F.2d 962 (11th Cir., 1992).

Appropriate engineering controls

Showers, eyewash stations, and ventilation systems.

Individual protection measures, such as personal protective equipment

Personal protective equipment (PPE) needs to be selected depending on the implemented engineering controls, frequency/duration of work activities and the concentrations of the hazardous substance.

Eye/face protection	Tightly fitting safety goggles.
Skin and body protection	Wear protective gloves/clothing.
Respiratory protection	If exposure limits are exceeded or irritation is experienced, NIOSH/MSHA approved respiratory protection should be worn. Positive-pressure supplied air respirators may be required for high airborne contaminant concentrations. Respiratory protection must be provided in accordance with current local regulations.
Hygiene measures	Do not eat, drink or smoke when using this product. Remove and wash contaminated clothing before re-use. When using, do not eat, drink or smoke. Provide regular cleaning of equipment, work area and clothing.

SECTION 9. Physical and chemical properties

Information on basic physical and chemical properties

Physical state	Liquid
Appearance	No information available
Odor	No information available
Color	Clear
Odor Threshold	No information available
pH	7.5
Melting point/freezing point	No information available
Initial boiling point and boiling range	No information available
Flash point	No information available
Evaporation rate	No information available
Flammability (solid, gas)	No information available
Upper flammability limit	No information available
Lower flammability limit	No information available
Vapor pressure	No information available
Vapor density	No information available
Relative density	No information available
Solubility	No information available
Solubility in other solvents	No information available
Partition coefficient: n-octanol/water	No information available
Autoignition temperature	No information available
Decomposition temperature	No information available
Explosive properties	No information available
Oxidizing properties	No information available
VOC content	No information available
Viscosity	No information available
Density	No information available

SECTION 10. Stability and reactivity

Reactivity

No information available.

Chemical stability

Stable under recommended storage conditions.

Possibility of hazardous reactions

Hazardous reactions None under normal processing.
Hazardous polymerization None under normal processing.

Conditions to Avoid

No information available.

Incompatible Materials

None known based on information supplied.

Hazardous Decomposition Products

None known based on information supplied.

SECTION 11. Toxicological information**Information on likely routes of exposure**

Inhalation There is no data available for this product.
Eye contact Expected to be an irritant based on components.
Skin contact There is no data available for this product.
Ingestion There is no data available for this product.

Information on toxicological effects

This material should only be handled by, or under the close supervision of, those properly qualified in the handling and use of potentially hazardous chemicals. It should be borne in mind that the toxicological and physiological properties of this compound is not well defined.

Chemical Name	LD50 Oral	LD50 Dermal	LC50 Inhalation
sodium fluoride 7681-49-4	= 52 mg/kg (Rat)	= 175 mg/kg (Rat)	-
tetrasodium pyrophosphate, decahydrate 13472-36-1	> 2000 mg/kg (Rat)	-	-
polyethylene glycol p-(1,1,3,3-tetramethylbutyl)phenylet her 9002-93-1	= 1,800 mg/kg (Rat)	= 8,000 mg/kg (Rabbit)	-

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Symptoms No information available.
Corrosivity No information available.
Sensitization No information available.
Mutagenic effects No information available.
Carcinogenicity No component of this product present at levels greater than or equal to 0.1% is identifiable as probable, possible or confirmed carcinogen by IARC, ACGIH, NTP, or OSHA.
Reproductive toxicity No information available.
Developmental Toxicity No information available.
Teratogenicity No information available.
STOT - single exposure No information available.
STOT - repeated exposure No information available.
Neurological effects No information available.
Aspiration Hazard No information available.
Endocrine Disruptor Information No information available.

SECTION 12. Ecological information

Ecotoxicity

99.02% of the mixture consists of components(s) of unknown hazards to the aquatic environment

Chemical Name	Toxicity to algae	Toxicity to fish	Toxicity to daphnia and other aquatic invertebrates
sodium fluoride 7681-49-4	EC50 850 mg/L (Desmodesmus subspicatus) 72 h EC50 272 mg/L (Pseudokirchneriella subcapitata) 96 h	LC50 180 mg/L (Pimephales promelas) 96 h LC50 830 mg/L (Lepomis macrochirus) 96 h LC50 38 - 68 mg/L (Oncorhynchus mykiss) 96 h LC50 530 mg/L (Lepomis macrochirus) 96 h	EC50 338 mg/L (Daphnia magna) 48 h EC50 98 mg/L (Daphnia magna) 48 h
polyethylene glycol p-(1,1,3,3-tetramethylbutyl)phenylether 9002-93-1		LC50: 8.9 mg/L (Pimephales promelas) 96 h	EC50: 26 mg/L (Daphnia) 48 h

Persistence and degradability	No information available.
Bioaccumulation	No information available.
Mobility	No information available

Other adverse effects

No information available.

SECTION 13. Disposal considerations

Waste Disposal Methods

Dispose of in accordance with all applicable national environmental laws and regulations.

Disposal considerations

Do not empty into drains; dispose of this material and its container in a safe way.

California Waste Status This product contains one or more substances that are listed with the State of California as a hazardous waste

Chemical Name	California Hazardous Waste Status
sodium fluoride 7681-49-4	Toxic

SECTION 14. Transport information

This material is not subject to regulation as a hazardous material for shipping.

SECTION 15. Regulatory information

All of the components in the product are on the following Inventory lists:

TSCA	-
DSL	-
NDSL	Complies

SARA 313

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372.

SARA 311/312 Hazard Categories

Acute Health Hazard	Yes
Chronic Health Hazard	No
Fire Hazard	No
Sudden Release of Pressure Hazard	No
Reactive Hazard	No

Clean Water Act

This product contains the following substances which are regulated pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42):

Chemical Name	CWA - Reportable Quantities	CWA - Toxic Pollutants	CWA - Priority Pollutants	CWA - Hazardous Substances
sodium fluoride 7681-49-4	1000 lb			X

CERCLA

This material, as supplied, contains one or more substances regulated as a hazardous substance under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302):

Chemical Name	Hazardous Substances RQs	Extremely Hazardous Substances RQs
sodium fluoride 7681-49-4	1000 lb	

California Proposition 65

This product does not contain any Proposition 65 chemicals.

U.S. State Right-to-Know Regulations

Chemical Name	New Jersey	Massachusetts	Pennsylvania
sodium fluoride 7681-49-4	Listed	Listed	Listed
tetrasodium pyrophosphate, decahydrate 13472-36-1	Listed	Listed	Listed

U.S. EPA Label Information

This product does not contain any substances regulated as pesticides.

SECTION 16. Other information

Issuing Date: 2014-02-10

Revision Date: 2014-02-11

Disclaimer

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

End of Safety Data Sheet



Safety Data Sheet (SDS) According to the OSHA Hazard Communication Standard 29 CFR 1910.1200

Issuing Date: 2016-10-21

Revision Date: 2016-10-21

Version: 1

SECTION 1. Identification

Product identifier

Product number 3TUFUM
Product name G6PDH Developer (100X)

Recommended use of the chemical and restrictions on use

Identified uses This product is intended for research purposes only.
Uses advised against This product is not intended for use in diagnostic procedures or therapeutics.
This product is not intended for use in humans or animals.

Manufacturer, importer, supplier

Manufacturer address Cell Signaling Technology, Inc.
3 Trask Lane
Danvers, MA 01923
United States
TEL: +1 978 867 2300
FAX: +1 978 867 2400
Website www.cellsignal.com
Email address support@cellsignal.com
Emergency telephone number In case of emergency call CHEMTREC 1-800-424-9300

SECTION 2. Hazard(s) identification

Classification

This substance/mixture is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

Skin corrosion/irritation	Category 2
Serious eye damage/eye irritation	Category 2
Specific target organ toxicity - single exposure (STOT SE)	Category 3

GHS Label elements, including precautionary statements



Signal Word
Warning

Hazard statement(s)
Causes skin irritation. Causes serious eye irritation. May cause respiratory irritation.

Precautionary Statement(s)
Wash face, hands and any exposed skin thoroughly after handling. Wear protective gloves/protective clothing/eye protection/face

protection.

IF ON SKIN: Wash with plenty of soap and water.

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER or doctor/physician if you feel unwell.

Supplementary Hazard Information

No information available.

Hazards not otherwise classified (HNOC)

Not applicable.

Unknown Acute Toxicity 62.5% of the mixture consists of ingredient(s) of unknown acute toxicity

SECTION 3. Composition/information on ingredients

Chemical Name	CAS No	Weight %
7-sodiooxy-3H-phenoxazin-3-one 10-oxide	62758-13-8	40-70
trometamol	77-86-1	30-60

SECTION 4. First-aid measures

Eye contact	Rinse thoroughly with plenty of water for at least 15 minutes, lifting lower and upper eyelids. Consult a physician.
Skin contact	Wash skin with soap and water.
Inhalation	Move to fresh air.
Ingestion	Clean mouth with water and afterwards drink plenty of water.

Most important symptoms and effects, both acute and delayed

No information available.

Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

Advice for emergency responders

General advice	For further assistance, contact your local Poison Control Center.
Protection of first-aiders	Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.

SECTION 5. Fire-fighting measures

Extinguishing media

Suitable Extinguishing Media	Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
Unsuitable Extinguishing Media	CAUTION: Use of water spray when fighting fire may be inefficient.

Specific hazards arising from the chemical

No information available.

Explosion Data

Sensitivity to Mechanical Impact	None.
Sensitivity to Static Discharge	None.

Protective Equipment and Precautions for Firefighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

SECTION 6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

For non-emergency personnel	Ensure adequate ventilation.
Other information	No information available.

Environmental precautions

Do not flush into surface water or sanitary sewer system.

Methods and material for containment and cleaning up

Methods for containment	Prevent further leakage or spillage if safe to do so.
Methods for cleaning up	Use personal protective equipment. Cover powder spill with plastic sheet or tarp to minimize spreading and keep powder dry. Take up mechanically and collect in suitable container for disposal. Avoid dust formation. Clean contaminated surface thoroughly.

SECTION 7. Handling and storage

Precautions for safe handling

Handle in accordance with good industrial hygiene and safety practice.

Conditions for safe storage, including any incompatibilities

Technical measures/Storage conditions	Keep containers tightly closed in a dry, cool and well-ventilated place.
Packaging material	No information available.
Incompatible products	None known based on information supplied.

SECTION 8. Exposure controls/personal protection

Control parameters

This product, as supplied, does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies.

Appropriate engineering controls

Showers, eyewash stations, and ventilation systems.

Individual protection measures, such as personal protective equipment

Personal protective equipment (PPE) needs to be selected depending on the implemented engineering controls, frequency/duration of work activities and the concentrations of the hazardous substance.

Eye/face protection	Safety glasses with side-shields.
Skin and body protection	Wear protective gloves/clothing.
Respiratory protection	If exposure limits are exceeded or irritation is experienced, NIOSH/MSHA approved respiratory protection should be worn. Positive-pressure supplied air respirators may be required for high airborne contaminant concentrations. Respiratory protection must be provided in accordance with current local regulations.
Hygiene measures	Handle in accordance with good industrial hygiene and safety practice.

SECTION 9. Physical and chemical properties

Information on basic physical and chemical properties

Physical state	Solid	Color	Dark Blue
Appearance	Lyophilized	Odor Threshold	No information available
Odor	No information available		

<u>Property</u>	<u>Values</u>	<u>Remarks</u>	<u>Method</u>
pH	No information available		
Melting point/freezing point			
Initial boiling point and boiling range			
Flash point			
Evaporation rate	No information available		
Flammability (solid, gas)	No information available		
Upper flammability limit			
Upper flammability limit	No information available		
Lower flammability limit	No information available		
Vapor pressure	No information available		
Vapor density	No information available		
Relative density	No information available		
Solubility	No information available.		
Solubility in other solvents	No information available.		
Partition coefficient: n-octanol/water	No information available		
Autoignition temperature	No information available		
Decomposition temperature	No information available		
Viscosity	No information available		
Viscosity, dynamic	No information available		
Explosive properties	No information available		
Oxidizing properties	No information available		
 <u>Other information</u>			
Softening point	No information available		
Molecular Weight	No information available		
VOC content	No information available		
Density	No information available.		
Bulk Density VALUE	No information available.		

SECTION 10. Stability and reactivity

Reactivity

No information available.

Chemical stability

Stable under recommended storage conditions.

Possibility of hazardous reactions

Hazardous reactions	None under normal processing.
Hazardous polymerization	None under normal processing.

Conditions to Avoid

No information available.

Incompatible Materials

None known based on information supplied.

Hazardous Decomposition Products

None known based on information supplied.

SECTION 11. Toxicological information

Information on likely routes of exposure

Inhalation	May cause irritation of respiratory tract.
Eye contact	Severely irritating to eyes.
Skin contact	Irritating to skin.
Ingestion	Ingestion may cause irritation to mucous membranes.

Information on toxicological effects

This material should only be handled by, or under the close supervision of, those properly qualified in the handling and use of potentially hazardous chemicals. It should be borne in mind that the toxicological and physiological properties of this compound is not well defined.

Chemical Name	LD50 Oral	LD50 Dermal	LC50 Inhalation
trometamol	5900 mg/kg (Rat)	-	-

Unknown Acute Toxicity 62.5% of the mixture consists of ingredient(s) of unknown acute toxicity.

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Symptoms	No information available.
Sensitization	No information available.
Mutagenic effects	No information available.
Carcinogenicity	No component of this product present at levels greater than or equal to 0.1% is identifiable as probable, possible or confirmed carcinogen by IARC, ACGIH, NTP, or OSHA.
Reproductive toxicity	No information available.
STOT - single exposure	No information available.
STOT - repeated exposure	No information available.
Neurological effects	No information available.
Aspiration Hazard	No information available.

SECTION 12. Ecological information

Ecotoxicity

100% of the mixture consists of component(s) of unknown hazards to the aquatic environment.

Persistence and degradability	No information available.
Bioaccumulation	No information available.
Mobility	No information available.

Other adverse effects

No information available.

SECTION 13. Disposal considerations

Waste Disposal Methods

Dispose of in accordance with all applicable national environmental laws and regulations.

Disposal considerations

Do not empty into drains; dispose of this material and its container in a safe way.

SECTION 14. Transport information

This material is not subject to regulation as a hazardous material for shipping.

SECTION 15. Regulatory information

North American Inventory Listing

Chemical Name	TSCA 8(b)	TSCA 12(b)	DSL	NDSL
7-sodiooxy-3H-phenoxazin-3-one 10-oxide	Listed	Not Listed	Listed	Not Listed
trometamol	Listed	Not Listed	Listed	Not Listed

Canadian Workplace Hazardous Materials Information System (WHMIS) Classification

This product does not meet the criteria for classification under the Hazardous Products Act.

SARA 313

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372.

SARA 311/312 Hazard Categories

Acute Health Hazard	Yes
Chronic Health Hazard	No
Fire Hazard	No
Sudden Release of Pressure Hazard	No
Reactive Hazard	No

Clean Water Act

This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42).

CERCLA

This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355). There may be specific reporting requirements at the local, regional, or state level pertaining to releases of this material.

California Proposition 65

This product does not contain any Proposition 65 chemicals.

U.S. State Right-to-Know Regulations

This product does not contain any substances regulated under applicable state right-to-know regulations

U.S. FIFRA Label Information

This product does not contain any substances regulated as pesticides.

US Commerce Department - Export Administration Regulations Information

This product does not contain any substances regulated under the Chemical Weapons Convention (CWC).

U.S. Drug Enforcement Administration Information

This product does not contain any substances regulated under the DEA.

SECTION 16. Other information

Issuing Date: 2014-02-10

Revision Date: 2016-10-21

Disclaimer

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

End of Safety Data Sheet



Safety Data Sheet (SDS) According to the OSHA Hazard Communication Standard 29 CFR 1910.1200

Issuing Date: 2016-10-21

Revision Date: 2016-10-21

Version: 1

SECTION 1. Identification

Product identifier

Product number XLXGTS
Product name NADP+(100X)

Recommended use of the chemical and restrictions on use

Identified uses This product is intended for research purposes only.
Uses advised against This product is not intended for use in diagnostic procedures or therapeutics.
This product is not intended for use in humans or animals.

Manufacturer, importer, supplier

Manufacturer address Cell Signaling Technology, Inc.
3 Trask Lane
Danvers, MA 01923
United States
TEL: +1 978 867 2300
FAX: +1 978 867 2400

Website www.cellsignal.com
Email address support@cellsignal.com
Emergency telephone number In case of emergency call CHEMTREC 1-800-424-9300

SECTION 2. Hazard(s) identification

Classification

This substance/mixture is not considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

Skin corrosion/irritation	Category 2
Serious eye damage/eye irritation	Category 2
Specific target organ toxicity - single exposure (STOT SE)	Category 3

GHS Label elements, including precautionary statements



Signal Word
Warning

Hazard statement(s)
Causes skin irritation. Causes serious eye irritation. May cause respiratory irritation.

Precautionary Statement(s)
Wear protective gloves/protective clothing/eye protection/face protection.

IF ON SKIN: Wash with plenty of soap and water. Take off contaminated clothing and wash before reuse.
 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER or doctor/physician if you feel unwell.

Supplementary Hazard Information

No information available.

Hazards not otherwise classified (HNOC)

Not applicable.

Unknown Acute Toxicity 95% of the mixture consists of ingredient(s) of unknown acute toxicity

SECTION 3. Composition/information on ingredients

Formula C₂₁H₂₈N₇O₁₇P₃·xH₂O
Molecular Weight 743.4
Chemical nature Monoconstituent substance
Synonyms Triphosphopyridine Nucleotide; TPN; NADP; β-NADP; Coenzyme II

Chemical Name	CAS No	Weight %
nadide phosphate hydrate	53-59-8	60-100
acetone	67-64-1	1-5

SECTION 4. First-aid measures

Eye contact Rinse thoroughly with plenty of water for at least 15 minutes, lifting lower and upper eyelids. Consult a physician.
Skin contact Wash skin with soap and water.
Inhalation Move to fresh air.
Ingestion Clean mouth with water and afterwards drink plenty of water.

Most important symptoms and effects, both acute and delayed

No information available.

Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

Advice for emergency responders

General advice For further assistance, contact your local Poison Control Center.
Protection of first-aiders Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.

SECTION 5. Fire-fighting measures

Extinguishing media

Suitable Extinguishing Media Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
Unsuitable Extinguishing Media CAUTION: Use of water spray when fighting fire may be inefficient.

Specific hazards arising from the chemical

No information available.

Explosion Data

Sensitivity to Mechanical Impact None.
Sensitivity to Static Discharge None.

Protective Equipment and Precautions for Firefighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

SECTION 6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

For non-emergency personnel Ensure adequate ventilation.
Other information No information available.

Environmental precautions

See Section 12 for additional information.

Methods and material for containment and cleaning up

Methods for containment Prevent further leakage or spillage if safe to do so.
Methods for cleaning up Pick up and transfer to properly labeled containers.

SECTION 7. Handling and storage

Precautions for safe handling

Handle in accordance with good industrial hygiene and safety practice.

Conditions for safe storage, including any incompatibilities

Technical measures/Storage conditions Keep containers tightly closed in a dry, cool and well-ventilated place.
Packaging material No information available.
Incompatible products Strong acids. Strong oxidizing agents. Chlorinated compounds.

SECTION 8. Exposure controls/personal protection

Control parameters

Occupational exposure limit values			
Chemical Name	ACGIH TLV	OSHA PEL	NIOSH REL
acetone	STEL 750 ppm TWA : 500 ppm	TWA : 1000 ppm TWA : 2400 mg/m ³	IDLH : 2500 ppm TWA : 250 ppm TWA : 590 mg/m ³

(vacated) = Vacated limits revoked by the Court of Appeals decision in AFL-CIO v. OSHA, 965 F.2d 962 (11th Cir., 1992).

Appropriate engineering controls

Showers, eyewash stations, and ventilation systems.

Individual protection measures, such as personal protective equipment

Personal protective equipment (PPE) needs to be selected depending on the implemented engineering controls, frequency/duration of work activities and the concentrations of the hazardous substance.

Eye/face protection Safety glasses with side-shields.

Skin and body protection	Wear protective gloves/clothing.
Respiratory protection	If exposure limits are exceeded or irritation is experienced, NIOSH/MSHA approved respiratory protection should be worn. Positive-pressure supplied air respirators may be required for high airborne contaminant concentrations. Respiratory protection must be provided in accordance with current local regulations.
Hygiene measures	Handle in accordance with good industrial hygiene and safety practice.

SECTION 9. Physical and chemical properties

Information on basic physical and chemical properties

Physical state	Solid	Color	Off-white to pale yellow
Appearance	Lyophilized	Odor Threshold	No information available
Odor	No information available		

Property	Values	Remarks	Method
pH	No information available		
Melting point/freezing point			
Initial boiling point and boiling range			
Flash point			
Evaporation rate	No information available		
Flammability (solid, gas)	No information available		
Upper flammability limit			
Upper flammability limit	No information available		
Lower flammability limit	No information available		
Vapor pressure	No information available		
Vapor density	No information available		
Relative density	No information available		
Solubility	Soluble in water	50 mg/ml	
Solubility in other solvents	No information available.		
Partition coefficient: n-octanol/water	No information available		
Autoignition temperature	No information available		
Decomposition temperature	No information available		
Viscosity	No information available		
Viscosity, dynamic	No information available		
Explosive properties	No information available		
Oxidizing properties	No information available		
Other information			
Softening point	No information available		
Molecular Weight	743.4		
VOC content	No information available		
Density	No information available.		
Bulk Density VALUE	No information available.		

SECTION 10. Stability and reactivity

Reactivity

No information available.

Chemical stability

Stable under recommended storage conditions.

Possibility of hazardous reactions

Hazardous reactions	None under normal processing.
Hazardous polymerization	None under normal processing.

Conditions to Avoid

No information available.

Incompatible Materials

Strong acids. Strong oxidizing agents. Chlorinated compounds.

Hazardous Decomposition Products

None known based on information supplied.

SECTION 11. Toxicological information

Information on likely routes of exposure

Inhalation	Inhalation of dust in high concentration may cause irritation of respiratory system.
Eye contact	Irritating to eyes.
Skin contact	Irritating to skin.
Ingestion	There is no data available for this product.

Information on toxicological effects

This material should only be handled by, or under the close supervision of, those properly qualified in the handling and use of potentially hazardous chemicals. It should be borne in mind that the toxicological and physiological properties of this compound is not well defined.

Unknown Acute Toxicity 95% of the mixture consists of ingredient(s) of unknown acute toxicity.

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Symptoms	No information available.
Sensitization	No information available.
Mutagenic effects	No information available.
Carcinogenicity	No component of this product present at levels greater than or equal to 0.1% is identifiable as probable, possible or confirmed carcinogen by IARC, ACGIH, NTP, or OSHA.
Reproductive toxicity	No information available.
STOT - single exposure	No information available.
STOT - repeated exposure	No information available.
Target Organ Effects	Central nervous system (CNS), Eyes, Respiratory system, Skin.
Neurological effects	No information available.
Aspiration Hazard	No information available.

SECTION 12. Ecological information

Ecotoxicity

95% of the mixture consists of components(s) of unknown hazards to the aquatic environment.

Chemical Name	Toxicity to algae	Toxicity to fish	Toxicity to daphnia and other aquatic invertebrates
acetone	-	LC50 6210 - 8120 mg/L (Pimephales promelas) 96 h LC50 8300 mg/L (Lepomis macrochirus) 96 h LC50 4.74 - 6.33 mL/L (Oncorhynchus mykiss) 96 h	EC50 12600 - 12700 mg/L (Daphnia magna) 48 h EC50 10294 - 17704 mg/L (Daphnia magna) 48 h

Persistence and degradability	No information available.
Bioaccumulation	Some components of this material are unlikely to bioaccumulate but most have not been tested.
Mobility	No information available

Chemical Name	Octanol-Water Partition Coefficient
acetone	-0.24

Other adverse effects

No information available.

SECTION 13. Disposal considerations

Waste Disposal Methods

Dispose of in accordance with all applicable national environmental laws and regulations.

Disposal considerations

Do not empty into drains; dispose of this material and its container in a safe way.

SECTION 14. Transport information

This material is not subject to regulation as a hazardous material for shipping.

SECTION 15. Regulatory information

North American Inventory Listing

Chemical Name	TSCA 8(b)	TSCA 12(b)	DSL	NDSL
nadide phosphate hydrate	Listed	Not Listed	Listed	Not Listed
acetone	Listed	Not Listed	Listed	Not Listed

Canadian Workplace Hazardous Materials Information System (WHMIS) Classification

This product does not meet the criteria for classification under the Hazardous Products Act.

SARA 313

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372.

SARA 311/312 Hazard Categories

Acute Health Hazard	Yes
Chronic Health Hazard	No
Fire Hazard	No
Sudden Release of Pressure Hazard	No
Reactive Hazard	No

Clean Water Act

This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42).

CERCLA

This material, as supplied, contains one or more substances regulated as a hazardous substance under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302):

Chemical Name	Hazardous Substances RQs	Extremely Hazardous Substances RQs
acetone	5000 lb	Not Listed

California Proposition 65

This product does not contain any Proposition 65 chemicals.

U.S. State Right-to-Know Regulations

This product does not contain any substances regulated under applicable state right-to-know regulations

Chemical Name	New Jersey	Massachusetts	Pennsylvania
acetone	Listed	Listed	Listed

U.S. FIFRA Label Information

This product does not contain any substances regulated as pesticides.

US Commerce Department - Export Administration Regulations Information

This product does not contain any substances regulated under the Chemical Weapons Convention (CWC).

U.S. Drug Enforcement Administration Information

This product does not contain any substances regulated under the DEA.

Chemical Name	Controlled Substances (Schedule I - V)	List I or Precursor Chemicals	List II or Essential Chemicals
acetone 1-5	Not Listed	Not Listed	Listed

SECTION 16. Other information

Issuing Date: 2014-02-18
Revision Date: 2016-10-21
Disclaimer

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

End of Safety Data Sheet