



SAFETY DATA SHEET

Creation Date 11-Oct-2010

Revision Date 11-Jun-2015

Revision Number 2

1. Identification

Product Name Paraformaldehyde

Cat No. : AC169650000; AC169650010; AC169650025; AC169650100;
AC169650250

Synonyms Formaldehyde polymer; Polyoxymethylene; Polyformaldehyde

Recommended Use Laboratory chemicals.

Uses advised against No Information available

Details of the supplier of the safety data sheet

Company	Entity / Business Name	Emergency Telephone Number
Fisher Scientific One Reagent Lane Fair Lawn, NJ 07410 Tel: (201) 796-7100	Acros Organics One Reagent Lane Fair Lawn, NJ 07410	For information US call: 001-800-ACROS-01 / Europe call: +32 14 57 52 11 Emergency Number US :001-201-796-7100 / Europe : +32 14 57 52 99 CHEMTREC Tel. No. US :001-800-424-9300 / Europe :001-703-527-3887

2. Hazard(s) identification

Classification

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

Flammable solids	Category 2
Acute oral toxicity	Category 4
Acute Inhalation Toxicity - Dusts and Mists	Category 4
Skin Corrosion/Irritation	Category 2
Serious Eye Damage/Eye Irritation	Category 1
Skin Sensitization	Category 1
Carcinogenicity	Category 2
Specific target organ toxicity (single exposure)	Category 3
Target Organs - Respiratory system.	
Combustible dust	Yes

Label Elements

Signal Word

Danger

Hazard Statements

Flammable solid May form combustible dust concentrations in air
Harmful if swallowed
Causes skin irritation
May cause an allergic skin reaction
Causes serious eye damage

Harmful if inhaled
 May cause respiratory irritation
 Suspected of causing cancer



Precautionary Statements

Prevention

Obtain special instructions before use
 Do not handle until all safety precautions have been read and understood
 Use personal protective equipment as required
 Wash face, hands and any exposed skin thoroughly after handling
 Do not eat, drink or smoke when using this product
 Avoid breathing dust/fume/gas/mist/vapors/spray
 Use only outdoors or in a well-ventilated area
 Contaminated work clothing should not be allowed out of the workplace
 Wear protective gloves
 Keep away from heat/sparks/open flames/hot surfaces. - No smoking
 Ground/bond container and receiving equipment
 Use explosion-proof electrical/ventilating/lighting/equipment

Response

IF exposed or concerned: Get medical attention/advice

Inhalation

IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing

Skin

IF ON SKIN: Wash with plenty of soap and water
 Take off contaminated clothing and wash before reuse
 If skin irritation or rash occurs: Get medical advice/attention

Eyes

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
 Immediately call a POISON CENTER or doctor/physician

Ingestion

IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell
 Rinse mouth

Fire

In case of fire: Use CO₂, dry chemical, or foam for extinction

Storage

Store locked up
 Store in a well-ventilated place. Keep container tightly closed

Disposal

Dispose of contents/container to an approved waste disposal plant

Hazards not otherwise classified (HNOC)

None identified

3. Composition / information on ingredients

Component	CAS-No	Weight %
Paraformaldehyde	30525-89-4	>90

4. First-aid measures

General Advice

If symptoms persist, call a physician.

Eye Contact	Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Obtain medical attention.
Skin Contact	Wash off immediately with plenty of water for at least 15 minutes. Obtain medical attention.
Inhalation	Move to fresh air. If breathing is difficult, give oxygen. Obtain medical attention.
Ingestion	Clean mouth with water and drink afterwards plenty of water. Get medical attention if symptoms occur.
Most important symptoms/effects	Breathing difficulties. May cause allergic skin reaction. Causes eye burns. . Inhalation of high vapor concentrations may cause symptoms like headache, dizziness, tiredness, nausea and vomiting: Symptoms of allergic reaction may include rash, itching, swelling, trouble breathing, tingling of the hands and feet, dizziness, lightheadedness, chest pain, muscle pain or flushing
Notes to Physician	Treat symptomatically

5. Fire-fighting measures

Suitable Extinguishing Media	Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide. Cool closed containers exposed to fire with water spray.
Unsuitable Extinguishing Media	No information available
Flash Point	71 °C / 159.8 °F
Method -	No information available
Autoignition Temperature	300 °C / 572 °F
Explosion Limits	
Upper	73%
Lower	7.0%
Sensitivity to Mechanical Impact	No information available
Sensitivity to Static Discharge	No information available

Specific Hazards Arising from the Chemical

Flammable. Containers may explode when heated. Fine dust dispersed in air may ignite.

Hazardous Combustion Products

Carbon monoxide (CO) Carbon dioxide (CO₂)

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.

NFPA

Health	Flammability	Instability	Physical hazards
3	2	1	N/A

6. Accidental release measures

Personal Precautions	Use personal protective equipment. Ensure adequate ventilation. Avoid dust formation. Remove all sources of ignition. Take precautionary measures against static discharges.
Environmental Precautions	Should not be released into the environment. See Section 12 for additional ecological information.
Methods for Containment and Clean Up	Sweep up or vacuum up spillage and collect in suitable container for disposal. Keep in suitable, closed containers for disposal. Remove all sources of ignition.

7. Handling and storage

Handling	Wear personal protective equipment. Avoid dust formation. Do not get in eyes, on skin, or on clothing. Avoid ingestion and inhalation. Ensure adequate ventilation. Keep away from
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open flames, hot surfaces and sources of ignition.

Storage Keep containers tightly closed in a dry, cool and well-ventilated place. Keep away from heat and sources of ignition.

8. Exposure controls / personal protection

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

Engineering Measures Use only under a chemical fume hood. Ensure that eyewash stations and safety showers are close to the workstation location. Use explosion-proof electrical/ventilating/lighting/equipment. Ensure adequate ventilation, especially in confined areas.

Personal Protective Equipment

Eye/face Protection Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166. Tightly fitting safety goggles.

Skin and body protection Long sleeved clothing.

Respiratory Protection 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.

Hygiene Measures Handle in accordance with good industrial hygiene and safety practice.

9. Physical and chemical properties

Physical State	Solid
Appearance	White
Odor	pungent
Odor Threshold	No information available
pH	3.5-5.0 10% susp
Melting Point/Range	120 - 170 °C / 248 - 338 °F
Boiling Point/Range	No information available
Flash Point	71 °C / 159.8 °F
Evaporation Rate	Not applicable
Flammability (solid,gas)	No information available
Flammability or explosive limits	
Upper	73%
Lower	7.0%
Vapor Pressure	1.2 mmHg @ 25 °C
Vapor Density	Not applicable
Relative Density	1.46
Solubility	No information available
Partition coefficient; n-octanol/water	No data available
Autoignition Temperature	300 °C / 572 °F
Decomposition Temperature	No information available
Viscosity	Not applicable
Molecular Formula	(CH ₂ O) _n

10. Stability and reactivity

Reactive Hazard Yes

Stability Stable under normal conditions.

Conditions to Avoid	Incompatible products. Excess heat. Avoid dust formation. Keep away from open flames, hot surfaces and sources of ignition.
Incompatible Materials	Strong oxidizing agents
Hazardous Decomposition Products	Carbon monoxide (CO), Carbon dioxide (CO ₂)
Hazardous Polymerization	Hazardous polymerization does not occur.
Hazardous Reactions	None under normal processing.

11. Toxicological information

Acute Toxicity

Product Information

Oral LD50

Category 4. ATE = 300 - 2000 mg/kg.

Dermal LD50

Based on ATE data, the classification criteria are not met. ATE > 2000 mg/kg.

Mist LC50

Category 4. ATE = 1 - 5 mg/l.

Component Information

Component	LD50 Oral	LD50 Dermal	LC50 Inhalation
Paraformaldehyde	800 mg/kg (Rat)	Not listed	1070 mg/m ³ (Rat) 4 h

Toxicologically Synergistic Products No information available

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

Irritation Irritating to eyes, respiratory system and skin

Sensitization No information available

Carcinogenicity The table below indicates whether each agency has listed any ingredient as a carcinogen.

Component	CAS-No	IARC	NTP	ACGIH	OSHA	Mexico
Paraformaldehyde	30525-89-4	Not listed	Not listed	Not listed	Not listed	Not listed

Mutagenic Effects Mutagenic effects have occurred in experimental animals.

Reproductive Effects No information available.

Developmental Effects No information available.

Teratogenicity No information available.

STOT - single exposure Respiratory system

STOT - repeated exposure None known

Aspiration hazard No information available

Symptoms / effects, both acute and delayed Inhalation of high vapor concentrations may cause symptoms like headache, dizziness, tiredness, nausea and vomiting. Symptoms of allergic reaction may include rash, itching, swelling, trouble breathing, tingling of the hands and feet, dizziness, lightheadedness, chest pain, muscle pain or flushing

Endocrine Disruptor Information No information available

Other Adverse Effects Carcinogenic effects have been reported in experimental animals. The toxicological properties have not been fully investigated. See actual entry in RTECS for complete information.

12. Ecological information

Ecotoxicity

Do not empty into drains.

Component	Freshwater Algae	Freshwater Fish	Microtox	Water Flea
Paraformaldehyde	Not listed	>10 mg/L 96h	Not listed	EC50 = 42 mg/L 24h

Persistence and Degradability No information available
Bioaccumulation/ Accumulation No information available.

Mobility No information available.

13. Disposal considerations

Waste Disposal Methods Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. Chemical waste generators must also consult local, regional, and national hazardous waste regulations to ensure complete and accurate classification.

14. Transport information

DOT

UN-No UN2213
Proper Shipping Name PARAFORMALDEHYDE
Hazard Class 4.1
Packing Group III

TDG

UN-No UN2213
Proper Shipping Name PARAFORMALDEHYDE
Hazard Class 4.1
Packing Group III

IATA

UN-No 2213
Proper Shipping Name PARAFORMALDEHYDE
Hazard Class 4.1
Packing Group III

IMDG/IMO

UN-No 2213
Proper Shipping Name PARAFORMALDEHYDE
Hazard Class 4.1
Packing Group III

15. Regulatory information

International Inventories

Component	TSCA	DSL	NDSL	EINECS	ELINCS	NLP	PICCS	ENCS	AICS	IECSC	KECL
Paraformaldehyde	X	X	-	-	-		X	X	X	X	X

Legend:

X - Listed

E - Indicates a substance that is the subject of a Section 5(e) Consent order under TSCA.

F - Indicates a substance that is the subject of a Section 5(f) Rule under TSCA.

N - Indicates a polymeric substance containing no free-radical initiator in its inventory name but is considered to cover the designated polymer made with any free-radical initiator regardless of the amount used.

P - Indicates a commenced PMN substance

R - Indicates a substance that is the subject of a Section 6 risk management rule under TSCA.

S - Indicates a substance that is identified in a proposed or final Significant New Use Rule

T - Indicates a substance that is the subject of a Section 4 test rule under TSCA.

XU - Indicates a substance exempt from reporting under the Inventory Update Rule, i.e. Partial Updating of the TSCA Inventory Data Base Production and Site Reports (40 CFR 710(B)).

Y1 - Indicates an exempt polymer that has a number-average molecular weight of 1,000 or greater.

Y2 - Indicates an exempt polymer that is a polyester and is made only from reactants included in a specified list of low concern reactants that comprises one of the eligibility criteria for the exemption rule.

U.S. Federal Regulations

TSCA 12(b) Not applicable

SARA 313 Not applicable

SARA 311/312 Hazardous Categorization

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

Clean Water Act

Component	CWA - Hazardous Substances	CWA - Reportable Quantities	CWA - Toxic Pollutants	CWA - Priority Pollutants
Paraformaldehyde	X	1000 lb	-	-

Clean Air Act Not applicable

OSHA Occupational Safety and Health Administration
Not applicable

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)

Component	Hazardous Substances RQs	CERCLA EHS RQs
Paraformaldehyde	1000 lb	-

California Proposition 65 This product does not contain any Proposition 65 chemicals

State Right-to-Know

Component	Massachusetts	New Jersey	Pennsylvania	Illinois	Rhode Island
Paraformaldehyde	X	X	X	-	X

U.S. Department of Transportation

Reportable Quantity (RQ):	N
DOT Marine Pollutant	N
DOT Severe Marine Pollutant	N

U.S. Department of Homeland Security

This product does not contain any DHS chemicals.

Other International Regulations

Mexico - Grade Moderate risk, Grade 2

Canada

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all the information required by the CPR

WHMIS Hazard Class B3 Combustible liquid
D1B Toxic materials
D2B Toxic materials
E Corrosive material



16. Other information

Prepared By	Regulatory Affairs Thermo Fisher Scientific Email: EMSDS.RA@thermofisher.com
Creation Date	11-Oct-2010
Revision Date	11-Jun-2015
Print Date	11-Jun-2015
Revision Summary	This document has been updated to comply with the US OSHA HazCom 2012 Standard replacing the current legislation under 29 CFR 1910.1200 to align with the Globally Harmonized System of Classification and Labeling of Chemicals (GHS)

Disclaimer

The information provided on 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 guide for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered as 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 material or in any process, unless specified in the text.

End of SDS

Revision Date 4-2-15

1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND THE COMPANY/UNDERTAKING

Product Name Glutaraldehyde, 70%

Product Code(s) 20100 - 20150

Recommended Use For Further Manufacturing Use. For use as tissue fixative.
Not for Human or Animal Drug Use

Synonyms ALDEHYD GLUTAROWY (POLISH) * CIDEX * 1,3-DIFORMYLPROPANE *
GLUTARAL *GLUTARALDEHYD (CZECH) * GLUTARALDEHYDE (ACGIH) *
GLUTARDIALDEHYDE * GLUTARIC DIALDEHYDE * NCI-C55425 *
1,5-PENTANEDIAL * 1,5-PENTANEDIONE * POTENTIATED ACID
GLUTARALDEHYDE * SONACIDE *

Distributor
Ladd Research
83 Holly Court
Williston, VT 05495

Emergency Telephone Number Chemtrec 1-800-424-9300

Company Phone Number 1-802-658-4961
E-mail Address sales@laddresearch.com

2. HAZARDS IDENTIFICATION

GHS - Classification

Classification Acute Toxicity Oral 3 Skin Corrosion/Irritation 1B Skin Sensitizer 1 Respiratory Sensitizer 1 Aquatic Hazard (acute) 1 Germ Cell Mutagenicity 1B

Signal Word Danger



Hazard Statements

H340 - May cause genetic defects H317 - May cause an allergic skin reaction
H334 - May cause allergy or asthma symptoms or breathing difficulties if inhaled
H331 - Toxic if inhaled H301 - Toxic if swallowed H314 - Causes severe skin
burns and eye damage H400 - Very toxic to aquatic life

Precautionary Statements P310 - Immediately call a POISON CENTRE or doctor/physician P280 - Wear protective gloves/protective clothing/eye protection/face protection P302+ P352 - IF ON SKIN: Wash with plenty of soap and water P304 + P340 - IF INHALED: Remove victim to fresh air and keep at rest in a position 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

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	EC No.	REACH Reg. No.	CAS-No	Weight %	Classification
Glutaraldehyde	-	Not available	111-30-8	68-72	T;R23/25 C;R34 R42/43 N;R50

4. FIRST AID MEASURES

Eye Contact Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician

Skin Contact Wash off immediately with soap and plenty of water removing all contaminated clothes and shoes

Inhalation Move to fresh air. If breathing becomes difficult, give oxygen

Ingestion Clean mouth with water and afterwards drink plenty of water

Notes to Physician Treat symptomatically

5. FIRE-FIGHTING MEASURES

Flammable Properties Not flammable

Flash Point Not determined

Suitable Extinguishing Media Dry chemical, CO₂, water spray or regular foam

Hazardous Combustion Products Carbon oxides

Explosion Data

Sensitivity to Mechanical Impact Not sensitive

Sensitivity to Static Discharge Not sensitive

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

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions Avoid contact with skin, eyes and clothing. Use personal protective equipment. Ensure adequate ventilation

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

Methods for Cleaning Up Cover with dry lime or soda ash. Pick up and transfer to properly labeled containers. Ventilate area and wash spill site after material pickup is complete.

7. HANDLING AND STORAGE

Handling Handle in accordance with good industrial hygiene and safety practice. Container may be opened only under exhaust ventilation hood.

Storage Keep containers tightly closed in a dry, cool and well-ventilated place

Incompatible Products Strong oxidizing agents. Strong bases. Strong acids.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Chemical Name	ACGIH TLV	OSHA PEL	NIOSH IDLH
Glutaraldehyde 111-30-8		(vacated) Ceiling: 0.2 ppm (vacated) Ceiling: 0.8 mg/m ³	Ceiling: 0.2 ppm Ceiling: 0.8 mg/m ³

Engineering Measures Showers
Eyewash stations
Ventilation systems

Personal Protective Equipment

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 Handle in accordance with good industrial hygiene and safety practice

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	Clear to slightly Yellowish	
Odor	Pungent	
Odor Threshold	No information available	
Decomposition Temperature °C	No information available	
Freezing Point	No information available	
Initial Boiling Point	No information available	
Physical State	Liquid	
pH	No data available	
Flash Point	Not determined	
Autoignition Temperature	No data available	
Boiling Point/Range	No data available	
Melting Point/Range	No data available	
Flammability Limits in Air	Upper No data available	Lower No data available
Explosive Properties	No information available	
Oxidizing Properties	No information available	
Evaporation Rate	No data available	
MMHG @ 37.8 C	No data available	
Vapor Density	No data available	
Specific Gravity	1.129	
Density	1.1	
Solubility	No information available	
Partition Coefficient (n-octanol/water)	No data available	
Viscosity	No information available	

10. STABILITY AND REACTIVITY

Stability	Stable under recommended storage conditions
Incompatible Products	Strong oxidizing agents. Strong bases. Strong acids.
Conditions to Avoid	Avoid initiators, accelerators, heat, pressure and contamination. .
Hazardous Decomposition Products	Carbon oxides.
Hazardous Polymerization	Hazardous polymerization may occur.

11. TOXICOLOGICAL INFORMATION

Acute Toxicity

Product Information	Toxic if swallowed. Corrosive, causes burns. Sensitizer.
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Chemical Name	LD50 Oral	LD50 Dermal	LC50 Inhalation
Glutaraldehyde	66 mg/kg (Rat)	560 µL/kg (Rabbit) 2000 mg/kg (Rat)	0.1 mg/L (Rat) 4 h

Chronic Toxicity

Chronic Toxicity	Suspected mutagen.
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Target Organ Effects Central nervous system (CNS), Heart.

12. ECOLOGICAL INFORMATION

Ecotoxicity

Harmful to aquatic organisms.

Chemical Name	Toxicity to Algae	Toxicity to Fish	Microtox	Daphnia Magna (Water Flea)
Glutaraldehyde	EC50 = 0.61 mg/L 72 h EC50 = 0.84 mg/L 96 h	LC50= 13 mg/L Lepomis macrochirus 96 h	EC50 = 13.3 mg/L 17 h EC50 = 76.0 mg/L 5 min	EC50 = 14 mg/L 48 h

Chemical Name	Log Pow
Glutaraldehyde	= 0.22 25 °C OECD Guideline 107

13. DISPOSAL CONSIDERATIONS

Waste Disposal Method Dispose of material in accordance with all federal, state, and local regulations.

Contaminated Packaging Dispose of in accordance with all federal, state and local regulations

14. TRANSPORT INFORMATION

IATA

UN-No 3265
Proper Shipping Name CORROSIVE LIQUID, ACIDIC, ORGANIC, N.O.S. (GLUTARALDEHYDE)
Hazard Class 8
Packing Group II

DOT

Proper Shipping Name CORROSIVE LIQUID, ACIDIC, ORGANIC, N.O.S. (GLUTARALDEHYDE)
Hazard Class 8
UN-No 3265
Packing Group II

15. REGULATORY INFORMATION

REACH Title VII Restrictions No information available.

Chemical Name	Dangerous Substances	Organic Solvents	Harmful Substances Whose Names Are to be Indicated on the Label	Pollution Release and Transfer Registry (Class II):	Pollution Release and Transfer Registry (Class I):	Poison and Deleterious Substances Control Law:
Glutaraldehyde	>=>=0.1 % weight	Not applicable	Not applicable	Not applicable	66	Not applicable

Component	ISHA - Harmful Substances Prohibited for Manufacturing, Importing, Transferring, or Supplying	ISHA - Harmful Substances Requiring Permission	Toxic Chemical Classification Listing (TCCL) - Toxic Chemicals	Toxic Release Inventory (TRI) - Group I	Toxic Release Inventory (TRI) - Group II
Glutaraldehyde 111-30-8 (45-55)	Not applicable	Not applicable	97-1-5, 25 % or more in mixtures	Not applicable	>= 1.0 %

International Inventories

TSCA	Complies
EINECS/ELINCS	Complies
ENCS	Complies
IECSC	Complies
KECL	Complies
PICCS	Complies
AICS	Complies

U.S. Federal Regulations

SARA 313

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product contains a chemical or 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	Yes
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)

Clean Air Act, Section 112 Hazardous Air Pollutants (HAPs) (see 40 CFR 61)

This product contains the following substances which are listed hazardous air pollutants (HAPS) under Section 112 of the Clean Air Act:

Chemical Name	CAS-No	Weight %	HAPS data	VOC Chemicals	Class 1 Ozone Depletors	Class 2 Ozone Depletors
Glutaraldehyde	111-30-8	68-72		Group IV		

CERCLA**U.S. State Regulations****California Proposition 65**

This product does not contain any Proposition 65 chemicals.

Chemical Name	Massachusetts	New Jersey	Pennsylvania	Illinois	Rhode Island
Glutaraldehyde	X	X	X		X

International Regulations**Mexico - Grade**

Chemical Name	Carcinogen Status	Exposure Limits
Glutaraldehyde		Mexico: Ceiling= 0.7 mg/m ³ Mexico: Ceiling= 0.2 ppm

Canada**WHMIS Hazard Class**

- D1B Toxic materials
- D2A Very toxic materials
- D2B Toxic materials
- E Corrosive material

**16. OTHER INFORMATION**

Revision Date 4-2-2015

Recommended Restrictions No information available

Disclaimer

The information presented is believed to be correct and is the most accurate information available to us at this time. However, Ladd Research makes no warranty, express or implied, and assumes no liability for this information and the product described herein.



Fisher Scientific

Part of Thermo Fisher Scientific

SAFETY DATA SHEET

Creation Date 02-Feb-2010

Revision Date 27-May-2015

Revision Number 3

1. Identification

Product Name Sodium phosphate dibasic anhydrous

Cat No. : S393-3; S393-3LC; XXBA174

Synonyms Disodium hydrogen phosphate; Monohydrogen sodium phosphate (Granular/Powder/USP/FCC/EP/Laboratory/Certified ACS)

Recommended Use Laboratory chemicals.

Uses advised against No Information available

Details of the supplier of the safety data sheet

Company
Fisher Scientific
One Reagent Lane
Fair Lawn, NJ 07410
Tel: (201) 796-7100

Emergency Telephone Number
CHEMTREC®, Inside the USA: 800-424-9300
CHEMTREC®, Outside the USA: 001-703-527-3887

2. Hazard(s) identification

Classification

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

Specific target organ toxicity - (repeated exposure) Category 2
Target Organs - Kidney.

Label Elements

None required

Signal Word

Warning

Hazard Statements

May cause damage to organs through prolonged or repeated exposure



Precautionary Statements
Prevention

Do not breathe dust/fume/gas/mist/vapors/spray

Response

Get medical attention/advice if you feel unwell

Storage

Store locked up

Disposal

Dispose of contents/container to an approved waste disposal plant

Hazards not otherwise classified (HNOC)

None identified

Other hazards

hygroscopic. May cause eye, skin, and respiratory tract irritation.

3. Composition / information on ingredients

Component	CAS-No	Weight %
Sodium phosphate dibasic	7558-79-4	>95

4. First-aid measures

Eye Contact	Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Obtain medical attention.
Skin Contact	Wash off immediately with plenty of water for at least 15 minutes. Get medical attention immediately if symptoms occur.
Inhalation	Move to fresh air. If breathing is difficult, give oxygen. Get medical attention immediately if symptoms occur.
Ingestion	Do not induce vomiting. Obtain medical attention.
Most important symptoms/effects	No information available.
Notes to Physician	Treat symptomatically

5. Fire-fighting measures

Suitable Extinguishing Media	Substance is nonflammable; use agent most appropriate to extinguish surrounding fire.
Unsuitable Extinguishing Media	No information available
Flash Point	No information available
Method -	No information available
Autoignition Temperature	No information available
Explosion Limits	
Upper	No data available
Lower	No data available
Sensitivity to Mechanical Impact	No information available
Sensitivity to Static Discharge	No information available

Specific Hazards Arising from the Chemical

Non-combustible, substance itself does not burn but may decompose upon heating to produce corrosive and/or toxic fumes.

Hazardous Combustion Products

Sodium oxides Oxides of phosphorus

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.

NFPA

Health
2Flammability
0Instability
1Physical hazards
N/A

6. Accidental release measures

Personal Precautions	Use personal protective equipment. Ensure adequate ventilation. Avoid dust formation. Avoid contact with skin, eyes and clothing.
Environmental Precautions	Should not be released into the environment. See Section 12 for additional ecological information.
Methods for Containment and Clean Up	Avoid dust formation. Sweep up or vacuum up spillage and collect in suitable container for disposal.

7. Handling and storage

Handling	Wear personal protective equipment. Ensure adequate ventilation. Avoid dust formation. Do not breathe dust. Avoid contact with skin, eyes and clothing.
Storage	Keep containers tightly closed in a dry, cool and well-ventilated place.

8. Exposure controls / personal protection

Exposure Guidelines	This product does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies.
Engineering Measures	Ensure adequate ventilation, especially in confined areas. Ensure that eyewash stations and safety showers are close to the workstation location.
Personal Protective Equipment	
Eye/face Protection	Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166.
Skin and body protection	Wear appropriate protective gloves and clothing to prevent skin exposure.
Respiratory Protection	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.
Hygiene Measures	Handle in accordance with good industrial hygiene and safety practice.

9. Physical and chemical properties

Physical State	Powder Solid
Appearance	White
Odor	Odorless
Odor Threshold	No information available
pH	8.7-9.3 (@ 20) 5% aq.sol. 20°C
Melting Point/Range	No data available
Boiling Point/Range	No information available
Flash Point	No information available
Evaporation Rate	Not applicable
Flammability (solid,gas)	No information available
Flammability or explosive limits	
Upper	No data available
Lower	No data available
Vapor Pressure	No information available
Vapor Density	Not applicable
Relative Density	No information available

Solubility	Slightly soluble in water
Partition coefficient; n-octanol/water	No data available
Autoignition Temperature	No information available
Decomposition Temperature	> 240°C
Viscosity	Not applicable
Molecular Formula	H Na ₂ O ₄ P
Molecular Weight	141.96

10. Stability and reactivity

Reactive Hazard	None known, based on information available
Stability	Hygroscopic.
Conditions to Avoid	Incompatible products. Excess heat. Exposure to moist air or water.
Incompatible Materials	Strong oxidizing agents, Strong acids, Strong bases
Hazardous Decomposition Products	Sodium oxides, Oxides of phosphorus
Hazardous Polymerization	Hazardous polymerization does not occur.
Hazardous Reactions	None under normal processing.

11. Toxicological information

Acute Toxicity

Product Information No acute toxicity information is available for this product

Component Information

Component	LD50 Oral	LD50 Dermal	LC50 Inhalation
Sodium phosphate dibasic	17 g/kg (Rat)	Not listed	Not listed

Toxicologically Synergistic Products No information available

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

Irritation	No information available
Sensitization	No information available
Carcinogenicity	The table below indicates whether each agency has listed any ingredient as a carcinogen.

Component	CAS-No	IARC	NTP	ACGIH	OSHA	Mexico
Sodium phosphate dibasic	7558-79-4	Not listed	Not listed	Not listed	Not listed	Not listed

Mutagenic Effects	No information available
Reproductive Effects	No information available.
Developmental Effects	No information available.
Teratogenicity	No information available.
STOT - single exposure	None known
STOT - repeated exposure	Kidney
Aspiration hazard	No information available
Symptoms / effects, both acute and delayed	No information available
Endocrine Disruptor Information	No information available

Other Adverse Effects The toxicological properties have not been fully investigated. See actual entry in RTECS for complete information.

12. Ecological information

Ecotoxicity

Do not empty into drains.

Persistence and Degradability Soluble in water Persistence is unlikely based on information available.
Bioaccumulation/ Accumulation No information available.

Mobility Will likely be mobile in the environment due to its water solubility.

13. Disposal considerations

Waste Disposal Methods Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. Chemical waste generators must also consult local, regional, and national hazardous waste regulations to ensure complete and accurate classification.

14. Transport information

DOT Not regulated

TDG Not regulated

IATA Not regulated

IMDG/IMO Not regulated

15. Regulatory information

International Inventories

Component	TSCA	DSL	NDSL	EINECS	ELINCS	NLP	PICCS	ENCS	AICS	IECSC	KECL
Sodium phosphate dibasic	X	X	-	231-448-7	-		X	X	X	X	X

Legend:

X - Listed

E - Indicates a substance that is the subject of a Section 5(e) Consent order under TSCA.

F - Indicates a substance that is the subject of a Section 5(f) Rule under TSCA.

N - Indicates a polymeric substance containing no free-radical initiator in its inventory name but is considered to cover the designated polymer made with any free-radical initiator regardless of the amount used.

P - Indicates a commenced PMN substance

R - Indicates a substance that is the subject of a Section 6 risk management rule under TSCA.

S - Indicates a substance that is identified in a proposed or final Significant New Use Rule

T - Indicates a substance that is the subject of a Section 4 test rule under TSCA.

XU - Indicates a substance exempt from reporting under the Inventory Update Rule, i.e. Partial Updating of the TSCA Inventory Data Base Production and Site Reports (40 CFR 710(B)).

Y1 - Indicates an exempt polymer that has a number-average molecular weight of 1,000 or greater.

Y2 - Indicates an exempt polymer that is a polyester and is made only from reactants included in a specified list of low concern reactants that comprises one of the eligibility criteria for the exemption rule.

U.S. Federal Regulations

TSCA 12(b) Not applicable

SARA 313 Not applicable

SARA 311/312 Hazardous Categorization

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

Clean Water Act

Component	CWA - Hazardous Substances	CWA - Reportable Quantities	CWA - Toxic Pollutants	CWA - Priority Pollutants
Sodium phosphate dibasic	X	5000 lb	-	-

Clean Air Act Not applicable

OSHA Occupational Safety and Health Administration
Not applicable

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)

Component	Hazardous Substances RQs	CERCLA EHS RQs
Sodium phosphate dibasic	5000 lb	-

California Proposition 65 This product does not contain any Proposition 65 chemicals

State Right-to-Know

Component	Massachusetts	New Jersey	Pennsylvania	Illinois	Rhode Island
Sodium phosphate dibasic	X	X	X	-	-

U.S. Department of Transportation

Reportable Quantity (RQ): Y
DOT Marine Pollutant N
DOT Severe Marine Pollutant N

U.S. Department of Homeland Security

This product does not contain any DHS chemicals.

Other International Regulations

Mexico - Grade No information available

Canada

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all the information required by the CPR

WHMIS Hazard Class Non-controlled

16. Other information

Prepared By Regulatory Affairs
Thermo Fisher Scientific
Email: EMSDS.RA@thermofisher.com

Creation Date 02-Feb-2010
Revision Date 27-May-2015
Print Date 27-May-2015
Revision Summary This document has been updated to comply with the US OSHA HazCom 2012 Standard replacing the current legislation under 29 CFR 1910.1200 to align with the Globally Harmonized System of Classification and Labeling of Chemicals (GHS)

Disclaimer

The information provided on 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 guide for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered as 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 material or in any process, unless specified in the text.

End of SDS



SAFETY DATA SHEET

Creation Date 03-Mar-2010

Revision Date 23-May-2014

Revision Number 1

1. Identification

Product Name Cacodylic acid, sodium salt trihydrate

Cat No. : AC214970000; AC214970100; AC214970250; AC214971000;
AC214975000

Synonyms Dimethylarsinic acid sodium salt; Sodium cacodylate trihydrate

Recommended Use Laboratory chemicals.

Uses advised against No Information available

Details of the supplier of the safety data sheet

Company
Fisher Scientific
One Reagent Lane
Fair Lawn, NJ 07410
Tel: (201) 796-7100

Entity / Business Name
Acros Organics
One Reagent Lane
Fair Lawn, NJ 07410

Emergency Telephone Number
For information **US** call: 001-800-ACROS-01
/ **Europe** call: +32 14 57 52 11
Emergency Number **US**:001-201-796-7100 /
Europe: +32 14 57 52 99
CHEMTREC Tel. No.**US**:001-800-424-9300 /
Europe:001-703-527-3887

2. Hazard(s) identification

Classification

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

Acute oral toxicity	Category 3
Acute Inhalation Toxicity - Dusts and Mists	Category 3
Carcinogenicity	Category 1A
Specific target organ toxicity - (repeated exposure)	Category 2
Target Organs - Kidney.	

Label Elements

Signal Word

Danger

Hazard Statements

Toxic if swallowed
Toxic if inhaled
May cause cancer
May cause damage to organs through prolonged or repeated exposure



Precautionary Statements**Prevention**

Obtain special instructions before use
 Do not handle until all safety precautions have been read and understood
 Use personal protective equipment as required
 Wash face, hands and any exposed skin thoroughly after handling
 Do not eat, drink or smoke when using this product
 Do not breathe dust/fume/gas/mist/vapors/spray

Response

IF exposed or concerned: Get medical attention/advice

Ingestion

IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician

Rinse mouth

Storage

Store locked up

Disposal

Dispose of contents/container to an approved waste disposal plant

Hazards not otherwise classified (HNOC)

Very toxic to aquatic life with long lasting effects

3. Composition / information on ingredients

Component	CAS-No	Weight %
Arsenate, dimethyl, sodium	6131-99-3	98
Sodium cacodylate	124-65-2	-

4. First-aid measures

Eye Contact	Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Obtain medical attention.
Skin Contact	Wash off immediately with plenty of water for at least 15 minutes. Obtain medical attention.
Inhalation	Move to fresh air. If breathing is difficult, give oxygen. Do not use mouth-to-mouth resuscitation if victim ingested or inhaled the substance; induce artificial respiration with a respiratory medical device. Immediate medical attention is required.
Ingestion	Do not induce vomiting. Call a physician or Poison Control Center immediately.
Most important symptoms/effects Notes to Physician	No information available. Treat symptomatically

5. Fire-fighting measures

Suitable Extinguishing Media	Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.
Unsuitable Extinguishing Media	No information available
Flash Point	No information available
Method -	No information available
Autoignition Temperature	No information available
Explosion Limits	
Upper	No data available
Lower	No data available
Sensitivity to Mechanical Impact	No information available
Sensitivity to Static Discharge	No information available

Specific Hazards Arising from the Chemical

Thermal decomposition can lead to release of irritating gases and vapors. Keep product and empty container away from heat and sources of ignition.

Hazardous Combustion ProductsCarbon monoxide (CO) Carbon dioxide (CO₂) Sodium oxides arsenic oxides**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.

NFPA

Health	Flammability	Instability	Physical hazards
3	1	1	N/A

6. Accidental release measures**Personal Precautions**

Wear self-contained breathing apparatus and protective suit. Evacuate personnel to safe areas. Ensure adequate ventilation. Avoid dust formation. Do not get in eyes, on skin, or on clothing.

Environmental Precautions

Should not be released into the environment. See Section 12 for additional ecological information.

Methods for Containment and Clean Up

Wear self-contained breathing apparatus and protective suit. Sweep up or vacuum up spillage and collect in suitable container for disposal. Avoid dust formation.

7. Handling and storage**Handling**

Use only under a chemical fume hood. Wear personal protective equipment. Ensure adequate ventilation. Avoid dust formation. Do not breathe dust. Do not get in eyes, on skin, or on clothing. Do not ingest.

Storage

Keep containers tightly closed in a dry, cool and well-ventilated place.

8. Exposure controls / personal protection**Exposure Guidelines**

Component	Quebec	Mexico OEL (TWA)	Ontario TWA/EV
Arsenate, dimethyl, sodium 6131-99-3 (98)			TWA: 0.01 mg/m ³ STEL: 0.05 mg/m ³
Sodium cacodylate 124-65-2 (-)			TWA: 0.01 mg/m ³ STEL: 0.05 mg/m ³

Engineering Measures

Use only under a chemical fume hood. Ensure adequate ventilation, especially in confined areas. Ensure that eyewash stations and safety showers are close to the workstation location.

Personal Protective Equipment**Eye/face Protection**

Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166.

Skin and body protection

Wear appropriate protective gloves and clothing to prevent skin exposure.

Respiratory Protection

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.

Hygiene Measures

Handle in accordance with good industrial hygiene and safety practice.

9. Physical and chemical properties

Physical State	Solid
Appearance	White
Odor	No information available
Odor Threshold	No information available
pH	9.0-9.5 100g/l aq.sol (20°C)
Melting Point/Range	77 - 80 °C / 170.6 - 176 °F
Boiling Point/Range	No information available
Flash Point	No information available

Evaporation Rate	No information available
Flammability (solid,gas)	No information available
Flammability or explosive limits	
Upper	No data available
Lower	No data available
Vapor Pressure	No information available
Vapor Density	No information available
Relative Density	No information available
Solubility	Soluble in water
Partition coefficient; n-octanol/water	No data available
Autoignition Temperature	No information available
Decomposition temperature	No information available
Viscosity	No information available
Molecular Formula	C2 H6 As Na O2 . 3 H2 O
Molecular Weight	214.03

10. Stability and reactivity

Reactive Hazard	None known, based on information available
Stability	Stable under normal conditions. Hygroscopic.
Conditions to Avoid	Avoid dust formation. Incompatible products. Excess heat. Exposure to moisture.
Incompatible Materials	Strong oxidizing agents, Strong acids, Strong bases
Hazardous Decomposition Products	Carbon monoxide (CO), Carbon dioxide (CO ₂), Sodium oxides, arsenic oxides
Hazardous Polymerization	Hazardous polymerization does not occur.
Hazardous Reactions	None under normal processing.

11. Toxicological information

Acute Toxicity

Product Information See actual entry in RTECS for complete information.

Component Information

Component	LD50 Oral	LD50 Dermal	LC50 Inhalation
Sodium cacodylate	2600 mg/kg (Rat)	Not listed	Not listed

Toxicologically Synergistic Products No information available

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

Irritation	No information available
Sensitization	No information available
Carcinogenicity	The table below indicates whether each agency has listed any ingredient as a carcinogen.

Component	CAS-No	IARC	NTP	ACGIH	OSHA	Mexico
Arsenate, dimethyl, sodium	6131-99-3	Not listed	Not listed	Not listed	Not listed	Not listed
Sodium cacodylate	124-65-2	Group 1	Not listed	Not listed	X	Not listed

IARC: (International Agency for Research on Cancer)

IARC: (International Agency for Research on Cancer)

Group 1 - Carcinogenic to Humans

Group 2A - Probably Carcinogenic to Humans

Group 2B - Possibly Carcinogenic to Humans

Mutagenic Effects	No information available
Reproductive Effects	Experiments have shown reproductive toxicity effects on laboratory animals.
Developmental Effects	No information available.
Teratogenicity	No information available.

STOT - single exposure	None known
STOT - repeated exposure	Kidney
Aspiration hazard	No information available
Symptoms / effects, both acute and delayed	No information available
Endocrine Disruptor Information	No information available
Other Adverse Effects	The toxicological properties have not been fully investigated. See actual entry in RTECS for complete information.

12. Ecological information

Ecotoxicity

Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

Persistence and Degradability	No information available
Bioaccumulation/ Accumulation	No information available.
Mobility	No information available.

13. Disposal considerations

Waste Disposal Methods	Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. Chemical waste generators must also consult local, regional, and national hazardous waste regulations to ensure complete and accurate classification.
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14. Transport information

DOT

UN-No	UN1688
Proper Shipping Name	SODIUM CACODYLATE
Hazard Class	6.1
Packing Group	II

TDG

UN-No	UN1688
Proper Shipping Name	SODIUM CACODYLATE
Hazard Class	6.1
Packing Group	II

IATA

UN-No	UN1688
Proper Shipping Name	SODIUM CACODYLATE
Hazard Class	6.1
Packing Group	II

IMDG/IMO

UN-No	UN1688
Proper Shipping Name	SODIUM CACODYLATE
Hazard Class	6.1
Packing Group	II

15. Regulatory information

International Inventories

Component	TSCA	DSL	NDSL	EINECS	ELINCS	NLP	PICCS	ENCS	AICS	IECSC	KECL
Arsenate, dimethyl, sodium	-	-	-	-	-		X	-	-	X	-
Sodium cacodylate	X	X	-	204-708-2	-		X	-	X	-	X

Legend:

X - Listed

E - Indicates a substance that is the subject of a Section 5(e) Consent order under TSCA.

F - Indicates a substance that is the subject of a Section 5(f) Rule under TSCA.

N - Indicates a polymeric substance containing no free-radical initiator in its inventory name but is considered to cover the designated polymer made with any free-radical initiator regardless of the amount used.

P - Indicates a commenced PMN substance

R - Indicates a substance that is the subject of a Section 6 risk management rule under TSCA.

S - Indicates a substance that is identified in a proposed or final Significant New Use Rule

T - Indicates a substance that is the subject of a Section 4 test rule under TSCA.

XU - Indicates a substance exempt from reporting under the Inventory Update Rule, i.e. Partial Updating of the TSCA Inventory Data Base Production and Site Reports (40 CFR 710(B)).

Y1 - Indicates an exempt polymer that has a number-average molecular weight of 1,000 or greater.

Y2 - Indicates an exempt polymer that is a polyester and is made only from reactants included in a specified list of low concern reactants that comprises one of the eligibility criteria for the exemption rule.

U.S. Federal Regulations

TSCA 12(b) Not applicable

SARA 313

Component	CAS-No	Weight %	SARA 313 - Threshold Values %
Arsenate, dimethyl, sodium	6131-99-3	98	1.0
Sodium cacodylate	124-65-2	-	1.0

SARA 311/312 Hazardous Categorization

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

Clean Water Act

Component	CWA - Hazardous Substances	CWA - Reportable Quantities	CWA - Toxic Pollutants	CWA - Priority Pollutants
Arsenate, dimethyl, sodium	-	-	X	-
Sodium cacodylate	-	-	X	-

Clean Air Act Not applicable

OSHA Occupational Safety and Health Administration
Not applicable

CERCLA

Component	Hazardous Substances RQs	CERCLA EHS RQs
Sodium cacodylate	-	100 lb

California Proposition 65 This product does not contain any Proposition 65 chemicals

State Right-to-Know

Component	Massachusetts	New Jersey	Pennsylvania	Illinois	Rhode Island
Arsenate, dimethyl, sodium	-	X	X	X	-
Sodium cacodylate	X	X	X	X	-

U.S. Department of Transportation

Reportable Quantity (RQ): N
DOT Marine Pollutant N
DOT Severe Marine Pollutant N

U.S. Department of Homeland Security

This product does not contain any DHS chemicals.

Other International Regulations

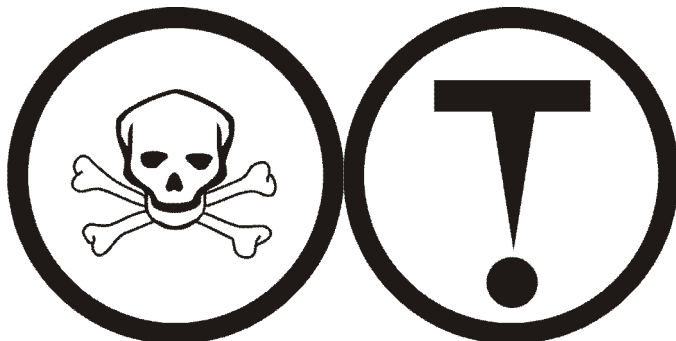
Mexico - Grade No information available

Canada

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all the information required by the CPR

WHMIS Hazard Class

D1A Very toxic materials
D2A Very toxic materials

**16. Other information****Prepared By**

Regulatory Affairs
Thermo Fisher Scientific
Email: EMSDS.RA@thermofisher.com

Creation Date

03-Mar-2010

Revision Date

23-May-2014

Print Date

23-May-2014

Revision Summary

This document has been updated to comply with the US OSHA HazCom 2012 Standard replacing the current legislation under 29 CFR 1910.1200 to align with the Globally Harmonized System of Classification and Labeling of Chemicals (GHS)

Disclaimer

The information provided on 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 guide for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered as 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 material or in any process, unless specified in the text.

End of SDS

S14-014

SIGMA-ALDRICH

SAFETY DATA SHEET

sigma-aldrich.com
Version 4.13
Revision Date 02/26/2014
Print Date 04/04/2014

1. PRODUCT AND COMPANY IDENTIFICATION

- 1.1 Product Identifiers : **Sodium phosphate monobasic**
- Product name : Sodium phosphate monobasic
- Product Number : S5011
- Brand : Sigma
- REACH No. : A registration number is not available for this substance as the substance or its uses are exempted from registration, the annual tonnage does not require a registration or the registration is envisaged for a later registration deadline.
- CAS-No. : 7558-80-7
- 1.2 Relevant identified uses of the substance or mixture and uses advised against
- Identified uses : Laboratory chemicals, Manufacture of substances
- 1.3 Details of the supplier of the safety data sheet
- Company : Sigma-Aldrich
3050 Spruce Street
SAINT LOUIS MO 63103
USA
- Telephone : +1 800-325-5832
- Fax : +1 800-325-5052
- 1.4 Emergency telephone number
- Emergency Phone # : (314) 776-6555

2. HAZARDS IDENTIFICATION

- 2.1 Classification of the substance or mixture
- Not a hazardous substance or mixture.
- 2.2 GHS Label elements, including precautionary statements
- Not a hazardous substance or mixture.
- 2.3 Hazards not otherwise classified (HNO3) or not covered by GHS - none

3. COMPOSITION/INFORMATION ON INGREDIENTS

- 3.1 Substances
- Synonyms : Monosodium phosphate
Sodium dihydrogen phosphate
- Formula : H2NaO4P
- Molecular Weight : 119.98 g/mol
- CAS-No. : 7558-80-7
- EC-No. : 231-449-2
- No ingredients are hazardous according to OSHA criteria.
- No components need to be disclosed according to the applicable regulations.

4. FIRST AID MEASURES

- 4.1 Description of first aid measures
- General advice
Consult a physician. Show this safety data sheet to the doctor in attendance.
- If inhaled
If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.
- In case of skin contact
Wash off with soap and plenty of water. Consult a physician.
- In case of eye contact
Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.
- If swallowed
Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.
- 4.2 Most important symptoms and effects, both acute and delayed
The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11
- 4.3 Indication of any immediate medical attention and special treatment needed
no data available
5. FIREFIGHTING MEASURES
- 5.1 Extinguishing media
- Suitable extinguishing media
- Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
- 5.2 Special hazards arising from the substance or mixture
Oxides of phosphorus, Sodium oxides
- 5.3 Advice for firefighters
Wear self contained breathing apparatus for fire fighting if necessary.
- 5.4 Further information
The product itself does not burn.

6. ACCIDENTAL RELEASE MEASURES

- 6.1 Personal precautions, protective equipment and emergency procedures
Use personal protective equipment. Avoid dust formation. Avoid dust formation. Avoid breathing vapours, mist or gas. Ensure adequate ventilation. Avoid breathing dust.
For personal protection see section 8.
- 6.2 Environmental precautions
Do not let product enter drains.
- 6.3 Methods and materials for containment and cleaning up
Pick up and arrange disposal without creating dust. Sweep up and shovel. Keep in suitable, closed containers for disposal.
- 6.4 Reference to other sections
For disposal see section 13.

7. HANDLING AND STORAGE

- 7.1 Precautions for safe handling
Avoid contact with skin and eyes. Avoid formation of dust and aerosols.
Provide appropriate exhaust ventilation at places where dust is formed.
For precautions see section 2.2.
- 7.2 Conditions for safe storage, including any incompatibilities
Keep container tightly closed in a dry and well-ventilated place.
Hygroscopic. Keep in a dry place. Keep in a dry place.

7.3 Specific end use(s)
Apart from the uses mentioned in section 1.2 no other specific uses are stipulated

8. EXPOSURE CONTROL/PERSONAL PROTECTION

8.1 Control parameters

Components with workplace control parameters
Contains no substances with occupational exposure limit values.

8.2 Exposure controls

Appropriate engineering controls
Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

Personal protective equipment

Eye/face protection

Safety glasses with side-shields conforming to EN166. Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

Skin protection

Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

Full contact

Material: Nitrile rubber

Minimum layer thickness: 0.11 mm

Break through time: 480 min.

Material tested: Dermathin® (KCL 740 / Aldrich Z877272, Size M)

Splash contact

Material: Nitrile rubber

Minimum layer thickness: 0.11 mm

Break through time: 480 min

Material tested: Dermathin® (KCL 740 / Aldrich Z877272, Size M)

data source: KCL GmbH, D-36124 Eichenzell, phone +49 (0)5659 87300, e-mail sales@kcl.de, test method: EN374

If used in solution, or mixed with other substances, and under conditions which differ from EN 374, contact the supplier of the CE approved gloves. This recommendation is advisory only and must be evaluated by an industrial hygienist and safety officer familiar with the specific situation of anticipated use by our customers. It should not be construed as offering an approval for any specific use scenario.

Body Protection

Impervious clothing. The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

Respiratory protection

For nuisance exposures use type P95 (US) or type P1 (EU EN 143) particle respirator. For higher level and protection use type OVIAG/P99 (US) or type ABEK-P2 (EU EN 143) respirator cartridges. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Control of environmental exposure

Do not let product enter drains.

9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

a) Appearance

Form: powder
Colour: white

b) Odour

no data available

c) Odour Threshold

no data available

d) pH

4.0 - 4.5 at 50 g/l at 25 °C (77 °F)

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Sigma-S5011

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e) Melting point/freezing point no data available

f) Initial boiling point and boiling range no data available

g) Flash point no data available

h) Evaporation rate no data available

i) Flammability (solid, gas) no data available

j) Upper/lower flammability or explosive limits no data available

k) Vapour pressure no data available

l) Vapour density no data available

m) Relative density no data available

n) Water solubility no data available

o) Partition coefficient: n-octanol/water no data available

p) Auto-ignition temperature no data available

q) Decomposition temperature no data available

r) Viscosity no data available

s) Explosive properties no data available

t) Oxidizing properties no data available

Other safety information no data available

Bulk density 940 kg/m³

10. STABILITY AND REACTIVITY

10.1 Reactivity no data available

10.2 Chemical stability Stable under recommended storage conditions.

10.3 Possibility of hazardous reactions no data available

10.4 Conditions to avoid Exposure to moisture.

10.5 Incompatible materials Strong oxidizing agents

10.6 Hazardous decomposition products Other decomposition products - no data available
In the event of fire: see section 5

11. TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

Acute toxicity no data available

Inhalation: no data available

Dermal: no data available

Sigma-S5011

Page 4 of 7

Skin corrosion/irritation
no data available
Serious eye damage/eye irritation
no data available
Respiratory or skin sensitisation
no data available
Germ cell mutagenicity
no data available

Carcinogenicity

IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

ACGIH: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.

NTP: No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

Reproductive toxicity

no data available

Specific target organ toxicity - single exposure
no data available

Specific target organ toxicity - repeated exposure
no data available

Aspiration hazard
no data available

Additional Information

RTECS: WA1900000

12. ECOLOGICAL INFORMATION

12.1 Toxicity
no data available

12.2 Persistence and degradability
no data available

12.3 Bioaccumulative potential
no data available

12.4 Mobility in soil
no data available

12.5 Results of PBT and vPvB assessment
PBT/vPvB assessment not available as chemical safety assessment not required/not conducted

12.6 Other adverse effects
no data available

13. DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods
Product
Offer surplus and non-recyclable solutions to a licensed disposal company.
Contaminated packaging
Dispose of as unused product.

14. TRANSPORT INFORMATION

DOT (US)
Not dangerous goods

IMDG
Not dangerous goods

IATA
Not dangerous goods

15. REGULATORY INFORMATION

REACH No. : A registration number is not available for this substance as the substance or its uses are exempted from registration, the annual tonnage does not require a registration or the registration is envisaged for a later registration deadline.

SARA 302 Components
SARA 302: No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

SARA 313 Components
SARA 313: This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

SARA 311/312 Hazards
No SARA Hazards

Massachusetts Right To Know Components
No components are subject to the Massachusetts Right to Know Act.

Pennsylvania Right To Know Components

Component	CAS-No.	Revision Date
Sodium dihydrogenorthophosphate	7558-80-7	
New Jersey Right To Know Components		
Sodium dihydrogenorthophosphate	CAS-No. 7558-80-7	Revision Date

California Prop. 65 Components

This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

16. OTHER INFORMATION

HMIS Rating	Health hazard:	0
Chronic Health Hazard:	0	
Flammability:	0	
Physical Hazard	0	
NFPA Rating	0	
Health hazard:	0	
Fire Hazard:	0	
Reactivity Hazard:	0	

Further information

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The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. Sigma-Aldrich Corporation and its Affiliates shall not be held liable for any damage resulting from handling or from contact with the above product. See www.sigma-aldrich.com and/or the reverse side of invoice or packing slip for additional terms and conditions of sale.

Preparation Information

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Product Safety – Americas Region
1-800-521-8956
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