

Safety Data Sheet

(In accordance with China GB/T 16483 and GB/T 17519)

Revision number 1
Revision date 02-Sep-2020

SECTION 1: Identification of the substance/mixture and of the company/undertaking

Identification of the substance or mixture

Product code 60109-104-SP
Product name Smart Digest™ Buffer (Kit Component 2)

Company/undertaking identification

Thermo Fisher Scientific
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Phone: +44-1928-534000
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Thermo Fisher Scientific (China) Co., Ltd.
Building 6 , No.27, Xin Jinqiao Road Pudong,
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Emergency telephone number for China 400-821-5118

24 hour Emergency Response for Hazardous Materials [or Dangerous Goods] Incident. Spill, Leak, Fire, Exposure, or Accident. Call CHEMTREC Within the USA + Canada: 1-800-424-9300 and 1-703-527-3887
Outside the USA + Canada: 1-703-741-5970

Country Specific Emergency Number (if available):

CHEMTREC South Korea 00-308-13-2549 (free call) (Welcome language: Korean)
CHEMTREC South Korea +(82) 070-7686-0086 (Welcome language: Korean)

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SECTION 2: Hazards identification

Emergency Overview

Overview	Causes serious eye irritation
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GHS Classification

Serious eye damage/eye irritation	Category 2A
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Label elements

Signal Word

WARNING

Hazard pictograms



Hazard Statements

Causes serious eye irritation

Precautionary Statements

Prevention

P280 - Wear protective gloves/protective clothing/eye protection/face protection

P264 - Wash hands thoroughly after handling

Response

P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing

P337 + P313 - If eye irritation persists: Get medical advice/attention

Storage

Not Applicable

Disposal

Not Applicable

Physical and chemical hazards

Hazardous reaction has not been reported

Health hazards

Causes serious eye irritation

Environmental hazards

Product code 60109-104-SP
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Not Hazardous

Other hazards

Not Applicable

SECTION 3: Composition/information on ingredients

Chemical Name	CAS No	EINECS-No.	Weight-%
SODIUM AZIDE	26628-22-8	247-852-1	<0.03
Calcium chloride	10043-52-4	233-140-8	<20

Sodium azide may react with lead and copper plumbing to form highly explosive metal azides. We recommend handling all chemicals with caution.

SECTION 4: First aid measures

Description of first aid measures

Skin contact	Wash off immediately with plenty of water for at least 15 minutes. Remove and wash contaminated clothing and gloves, including the inside, before re-use. Immediate medical attention is required.
Eye contact	Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Immediate medical attention is required.
Ingestion	Never give anything by mouth to an unconscious person. Do not induce vomiting without medical advice. Get medical attention if symptoms occur.
Inhalation	Remove to fresh air. If not breathing, give artificial respiration. If symptoms persist, call a doctor.
Notes to Physician	Treat symptomatically.

Most important symptoms and effects, both acute and delayed

Causes serious eye irritation

Indication of any immediate medical attention and special treatment needed

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

SECTION 5: Firefighting measures

Extinguishing media

Suitable extinguishing media	Water spray. Carbon dioxide (CO ₂). Foam. Dry chemical.
Unsuitable extinguishing media	No information available.

Special hazards arising from the substance or mixture Not known.

Protective equipment and precautions for firefighters Wear self-contained breathing apparatus and protective suit.

SECTION 6: Accidental release measures

Personal precautions, protective equipment and emergency procedures

Ensure adequate ventilation. Avoid contact with skin, eyes or clothing. Use personal protection equipment. See section 8 for more information.

Environmental precautions

No special environmental precautions required. Avoid discharge into drains and waterways whenever possible.

Methods and material for containment and cleaning up

Soak up with inert absorbent material.

Reference to other sections

See section 8 for more information.

SECTION 7: Handling and storage

Precautions for safe handling

Always wear recommended Personal Protective Equipment. See section 8 for more information. Do not get in eyes, on skin, or on clothing. Do not ingest. If during normal use the material presents a respiratory hazard, use adequate ventilation and/or wear appropriate respirator.

Conditions for safe storage, including any incompatibilities

Keep in a dry, cool and well-ventilated place. Keep in properly labelled containers. Store in accordance with local regulations.

Specific end use(s)

For research use only.

SECTION 8: Exposure controls/personal protection

Control parameters

Chemical Name	Australia STEL	Australia	Australia - Skin Absorbers	Australia - OES - Peak
SODIUM AZIDE 26628-22-8	None	None	None	0.11 ppm 0.3 mg/m ³
Calcium chloride 10043-52-4	None	None	None	None

Chemical Name	New Zealand - Workplace Exposure Limits	New Zealand TWA	New Zealand STEL	New Zealand Ceiling Limits
SODIUM AZIDE 26628-22-8				0.11 ppm 0.29 mg/m ³

Chemical Name	China OEL (MAC)	China - Skin Absorbers	Hong Kong OEL
SODIUM AZIDE 26628-22-8	Ceiling: 0.3 mg/m ³	None	None
Calcium chloride 10043-52-4	None	None	None

Chemical Name	Korea OEL (CEILING)	Korea OEL (TWA)	Korea OEL (STEL)
SODIUM AZIDE 26628-22-8	0.29 mg/m ³	None	None
Calcium chloride 10043-52-4	None	None	None

Chemical Name	Taiwan OEL - TWA	Taiwan OEL (Skin notations, Carcinogens)	Taiwan OEL (STELs)	Taiwan OEL (Ceilings)
SODIUM AZIDE 26628-22-8	None		None	0.11 ppm 0.29 mg/m ³
Calcium chloride 10043-52-4	None		None	

Chemical Name	Singapore OEL (PEL)	Singapore OEL (STEL)
SODIUM AZIDE 26628-22-8	None	0.29 mg/m ³ 0.11 ppm
Calcium chloride 10043-52-4	None	None

Engineering Measures Ensure adequate ventilation, especially in confined areas

Exposure controls

Personal Protective Equipment

Respiratory protection In case of insufficient ventilation wear respirators and components tested and approved under appropriate government standards.

Hand protection Wear suitable gloves Glove material: Compatible chemical-resistant gloves.

Eye protection Tight sealing safety goggles

Skin and Body Protection Wear laboratory coat for body protection

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

Environmental exposure controls

SECTION 9: Physical and chemical properties

Information on basic physical and chemical properties

Appearance	liquid	
Odour	No data	
Odour Threshold	No data	
pH	No data	
Melting point / melting range	°C No data	°F No data
Boiling point / boiling range	°C No data	°F No data
Flash point	°C No data	°F No data
Autoignition Temperature	°C No data	°F No data
Decomposition temperature	°C No data	°F No data
Evaporation rate	No data	
Flammability (solid, gas)	No data	
Upper explosion limit	No data	
Lower explosion limit	No data	
Vapour Pressure	No data	
Relative density	No data	
Specific gravity	No data	
Solubility	No data	
Partition coefficient: n-octanol/water	No data	
Viscosity	No data	
Explosive properties	No data	
Oxidising properties	No data	
Other information	No data	

SECTION 10: Stability and reactivity

Reactivity	Sodium azide may react with lead and copper plumbing to form highly explosive metal azides.
Chemical stability	Stable under normal conditions.
Possibility of hazardous reactions	Hazardous reaction has not been reported.
Conditions to avoid	None known.
Incompatible materials	No dangerous reaction known under conditions of normal use.
Hazardous decomposition products	No known hazardous decomposition products.

SECTION 11: Toxicological information

Information on toxicological effects

Chemical Name	Oral LD50	Dermal LD50	Inhalation LC50
SODIUM AZIDE	= 27 mg/kg (Rat)=27 mg/kg (Mouse)	=20 mg/kg(Rat)	No data available
Calcium chloride	= 1000 mg/kg (Rat)	> 5000 mg/kg(Rabbit)	No data available

Principal Routes of Exposure

Skin corrosion/irritation Data are conclusive but insufficient for classification

Serious eye damage/irritation Causes serious eye irritation

Respiratory or skin sensitisation Data are conclusive but insufficient for classification

Specific target organ toxicity (STOT) – single exposure Data are conclusive but insufficient for classification

Specific target organ toxicity (STOT) – repeated exposure Data are conclusive but insufficient for classification

Carcinogenicity Data are conclusive but insufficient for classification

Germ cell mutagenicity Data are conclusive but insufficient for classification

Reproductive Toxicity Data are conclusive but insufficient for classification

Aspiration hazard Data are conclusive but insufficient for classification

SECTION 12: Ecological information

Ecotoxicity

The environmental impact of this product has not been fully investigated.

Chemical Name	Toxicity to algae	Toxicity to daphnia and other aquatic invertebrates	Toxicity to fish	Microtox Data	log Pow
SODIUM AZIDE	No data available	No data available	LC50: = 5.46 mg/L, 96h flow-through (Pimephales promelas) LC50: = 0.7 mg/L, 96h (Lepomis macrochirus) LC50: = 0.8 mg/L, 96h (Oncorhynchus mykiss)	No data available	No data available
Calcium chloride	No data available	Daphnia magna LC502280000 - 3948000 µg/L (48 h)	No data available	No data available	No data available

Persistence and degradability No information available.

Bioaccumulative potential No information available.

Results of PBT and vPvB assessment

Other adverse effects No information available.

SECTION 13: Disposal considerations

Waste treatment methods

The generation of waste should be avoided or minimized wherever possible. Empty containers or liners may retain some product residues. This material and its container must be disposed of in accordance with approved disposal technique. Disposal of this product, its solutions or of any by-products, shall comply with the requirements of all applicable local, regional or national/federal regulations.

SECTION 14: Transport information

IATA / ADR / DOT-US / IMDG

Not regulated in the meaning of transport regulations.

UN number	Not Applicable
UN proper shipping name	Not Applicable
Transport hazard class(es)	Not Applicable
Packing group	Not Applicable
Environmental hazards	Not Applicable
Special precautions for user	Not Applicable

Transport in bulk according to Annex II of MARPOL and the IBC Code

Not Applicable.

SECTION 15: Regulatory information

International Inventories

Chemical Name	US TSCA	Canada (DSL)	NDSL	PICCS (Philippines)
SODIUM AZIDE	Listed	Listed	-	Listed
Calcium chloride	Listed	Listed	-	Listed

Chemical Name	ENCS (Japan)	IECSC - China Inventory of Existing Chemical Substances	South Korea (KECL)	AICS (Australia)
SODIUM AZIDE	Listed	Listed	Listed	Listed
Calcium chloride	Listed	Listed	Listed	Listed

Chemical Name	NZIoC - New Zealand Inventory of Chemicals	EINECS (European Union)	ELINCS (European List of Notified Chemical Substances)
SODIUM AZIDE	Listed	Listed	-
Calcium chloride	Listed	Listed	-

Korea

Occupational Safety and Health Act

Chemical Name	ISHA - Substances to be controlled - Metals	ISHA - Substances to be controlled - Organic Substances	ISHA - Substances to be controlled - Acids and bases	ISHA - Substances to be controlled - Gas-phase substances
SODIUM AZIDE	Not Applicable	Not Applicable	Not Applicable	Not Applicable
Calcium chloride	Not Applicable	Not Applicable	Not Applicable	Not Applicable

Chemical Name	ISHA - Harmful Substances Prohibited for Manufacturing, Importing, Transferring, or Supplying	ISHA - Harmful Substances Requiring Permission	Special management materials
SODIUM AZIDE	Not Applicable	Not Applicable	Not Applicable
Calcium chloride	Not Applicable	Not Applicable	Not Applicable

Chemical Name	Harmful agents subject to work environment monitoring - Organic compounds	Harmful agents subject to work environment monitoring - Metals	Harmful agents subject to work environment monitoring - Acids and alkalis	Harmful agents subject to work environment monitoring - Gas-phase substances	Harmful agents subject to work environment monitoring - Dusts
SODIUM AZIDE	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable
Calcium chloride	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable

Chemical Name	Harmful agents subject to workers requiring health examination - Organic compounds	Harmful agents subject to workers requiring health examination - Metals	Harmful agents subject to workers requiring health examination - Acids and alkalis	Harmful agents subject to workers requiring health examination - Gas-phase substances	Harmful agents subject to workers requiring health examination - Dusts
SODIUM AZIDE	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable
Calcium chloride	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable

Chemical Name	Korea OEL (CEILING)	Korea OEL (TWA)	Korea OEL (STEL)	Korea OEL (Skin Notations)
SODIUM AZIDE	Applicable	Not Applicable	Not Applicable	Not Applicable
Calcium chloride	Not Applicable	Not Applicable	Not Applicable	Not Applicable

Chemical Name	Korea OEL (Carcinogens)	Korea OEL (Germ Cell Mutagenicity)	Korea OEL (Reproductive Toxicity)	Korea PEL (STELs)	Korea PEL (TWAs)
SODIUM AZIDE	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable
Calcium chloride	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable

Chemical Name	ISHA - Harmful or Dangerous Substances Subject to Submission of Process Safety Reports - Storage	ISHA - Harmful or Dangerous Substances Subject to Submission of Process Safety Reports - Manufacturing or Handling
SODIUM AZIDE	Not Applicable	Not Applicable
Calcium chloride	Not Applicable	Not Applicable

Chemicals Control Act

Chemical Name	Toxic substance	Prohibited substance	Restricted substance
SODIUM AZIDE	97-1-165 1% mixture cut-off	Not Applicable	Not Applicable
Calcium chloride	Not Applicable	Not Applicable	Not Applicable

Chemical Name	Threshold Values (%)	Quantity limit for manufacture/use	Quantity limit for custody/storage
SODIUM AZIDE	Not Applicable	Not Applicable	Not Applicable
Calcium chloride	Not Applicable	Not Applicable	Not Applicable

Chemical Name	Pollutant Release and Transfer Registers (PRTR) - Group I	Pollutant Release and Transfer Registers (PRTR) - Group II
SODIUM AZIDE	Not Applicable	>=1.0 % w/w cut-off value [339]
Calcium chloride	Not Applicable	Not Applicable

Act on Registration, Evaluation, etc. of Chemicals (K-REACH)

Chemical Name	Ministry of Environment - CMR risk	Ministry of Environment - Critically Controlled	Existing substances subject to registration	Substances Exempted from Registration or	Substances Exempted from Registration or

		Substance		Notification - Annex 1	Notification - Annex 2
SODIUM AZIDE	Not Applicable	Not Applicable	Present (registration completed, [439])	Not Applicable	Not Applicable
Calcium chloride	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable

Safety Control of Dangerous Substances Act

Chemical Name	Safety Control of Dangerous Substances Act
SODIUM AZIDE	200 kg (Metal Azide compounds)
Calcium chloride	Not Applicable

Wastes Control Act

Chemical Name	Wastes Control Act
SODIUM AZIDE	Not Applicable
Calcium chloride	Not Applicable

Singapore

Chemical Name	Singapore - Poisons List
SODIUM AZIDE	Not Listed
Calcium chloride	Not Listed

Taiwan

Chemical Name	Toxic Chemical Substances Control Act - Classification and Control Levels	Toxic Chemical Substances Control Act - Threshold Regulated Quantities	Hazard Prevention Standard for Specified Chemical Substances
SODIUM AZIDE	Not Listed	Not Listed	Not Listed
Calcium chloride	Not Listed	Not Listed	Not Listed

China

Chemical Name	China - Catalogue of Occupational Hazard Factors	China - Dangerous Goods List	China - Catalog of Hypertoxic Chemicals	China - List of Dangerous Chemicals for Priority Management
SODIUM AZIDE	Not Listed	Present Present (solid); Present (liquid; flammable; flashpoint not less than 23°C); Present	Present	Not Listed
Calcium chloride	Not Listed	Not Listed	Not Listed	Not Listed

Reason for revision SDS sections updated.
Revision number 1
Revision date 02-Sep-2020

For research use only.

References

- ECHA: <http://echa.europa.eu/>
- TOXNET: <http://toxnet.nlm.nih.gov/>
- eChemPortal: <http://www.echemportal.org/>
- LOLI database: <https://www.chemadvisor.com/loli-database>

Abbreviations and acronyms

TWA - Time-Weighted Average

OELs - Occupational Exposure Limits

STEL - Short Term Exposure Limit

DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List

KECL - Korean Existing and Evaluated Chemical Substances

ENCS - Japan Existing and New Chemical Substances

IECSC - China Inventory of Existing Chemical Substances

PICCS - Philippines Inventory of Chemicals and Chemical Substances

AICS - Australian Inventory of Chemical Substances

NZIoC - New Zealand Inventory of Chemicals

EINECS/ELINCS - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory

CEPA - Canadian Environmental Protection Act

EPA - Environmental Protection Agency

OSHA - Occupational Safety and Health Administration of the US Department of Labour

IATA - International Air Transport Association

DOT - Department of Transportation

IMDG - International Maritime Dangerous Goods

ACGIH - American Conference of Governmental Industrial Hygienists

NIOSH - National Institute for Occupational Safety and Health

AIHA - American Industrial Hygiene Association

HMIS - Department of Defense Hazardous Materials Information System

NTP - National Toxicology Program

IARC - International Agency for Research on Cancer

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End of Safety Data Sheet