

SAFETY DATA SHEETS

This SDS packet was issued with item:

078016159

N/A

Material Safety Data Sheet



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

Product name: Creatine Kinase, CKL
Product number: 04657420190
Business area: Centralized Diagnostics
Product line: Cobas

Supplier:
Roche Diagnostics Corporation
9115 Hague Road
Indianapolis, IN 46250
Site Phone Number: 1-800-428-5074

Emergency telephone number:
CHEMTREC:
1-800-424-9300 (U.S. or Canada)
1-703-527-3887 (International)

2. COMPOSITION/INFORMATION ON INGREDIENTS

Description 1: R1

Components	CAS Number	Weight %	OSHA PEL:	OSHA STEL:	ACGIH TLV:	ACGIH STEL:
Imidazole	288-32-4	0.1-<1	NA	NA	NA	NA
Potassium chloride	7447-40-7	0.1-<1	NA	NA	NA	NA

Description 2: R2

Components	CAS Number	Weight %	OSHA PEL:	OSHA STEL:	ACGIH TLV:	ACGIH STEL:
D-Sorbitol	50-70-4	20-30	NA	NA	NA	NA
Creatine-phosphate, disodium	19333-65-4	1-5	NA	NA	NA	NA
Sodium azide	26628-22-8	0.01-<0.1	NA	NA	NA	0.11 ppm Ceiling 0.29 mg/m ³ Ceiling

3. HAZARDS IDENTIFICATION

Emergency Overview

NFPA Ratings: Health= 1 Flammability= 0 Reactivity= 0

Special Definitions: A=Allergen CA=Carcinogen CO=Corrosive F=Flammable H=Harmful I=Irritant Ox=Oxidizer PB=Potential Biohazard
R=Reproductive S=Sensitizer T=Toxic T+=Highly Toxic W=Water Reactive

Principle routes of exposure: Ingestion, skin and/or eye contact

Inhalation: None

Ingestion: Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea

Skin contact: None

Eye contact: Contact with eyes may cause irritation

Sensitization or Odor threshold: The following chemical(s) may cause sensitization, be absorbed via skin, and/or has an odor threshold for detection:

Medical conditions aggravated by exposure: None known

Additional information: None

4. FIRST AID MEASURES

Inhalation: Consult a physician. Move to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen

Skin contact: Rinse with plenty of water. If skin irritation persists, call a physician. Remove and wash contaminated clothing before re-use

Ingestion: Consult a physician. Do not induce vomiting without medical advice

Eye contact: In the case of contact with eyes, rinse immediately with plenty of water and seek medical advice

Notes to physician: None determined

5. FIRE-FIGHTING MEASURES

Suitable extinguishing media: Use dry chemical, CO₂, water spray or 'alcohol' foam

Unusual hazards: None known

Special protective equipment for firefighters: Wear self contained breathing apparatus for fire fighting if necessary

6. ACCIDENTAL RELEASE MEASURES

Personal precautions: Use personal protective equipment. Evacuate personnel to safe areas

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

Methods for cleaning up: Never return spills in original containers for re-use. Sweep up or vacuum (if powder) or soak up with inert absorbent material (if liquid), then place into a suitable clean, dry, closed container, and label for disposal

7. HANDLING AND STORAGE

Handling: Protect from contamination. Wear personal protective equipment

Storage: No special precautions required

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Engineering measures: Not applicable

Personal Protective Equipment

Respiratory protection: Respiratory protection is not required under normal use of this product. If respiratory protection is needed, follow the OSHA regulation, 29CFR1910.134. Always use a NIOSH approved respirator when necessary

Hand protection: Wear appropriate protective gloves to prevent skin contact. Replace torn or punctured gloves promptly

Skin and body protection: Wear appropriate body protection to prevent skin contact

Eye protection: Wear appropriate eye protection to prevent eye contact

Hygiene measures: Avoid contact with skin, eyes and clothing

9. PHYSICAL AND CHEMICAL PROPERTIES

pH: Bottle R1 pH = 6.0, Bottle R2 pH = 9.0

Physical state: Liquid.

10. STABILITY AND REACTIVITY

Stability: Stable under recommended storage conditions

Polymerization: Not applicable

Hazardous decomposition products: Carbon oxides

Materials to avoid: Strong acids and strong bases. Strong oxidising agents

11. TOXICOLOGICAL INFORMATION

Components	NIOSH - Selected LD50s and LC50s:	NIOSH Pocket Guide - Target Organs:
Imidazole	=220 mg/kg Oral LD50 Rat	
Potassium chloride	=2600 mg/kg Oral LD50 Rat	

Components	NIOSH - Selected LD50s and LC50s:	NIOSH Pocket Guide - Target Organs:
D-Sorbitol	=15900 mg/kg Oral LD50 Rat	
Sodium azide	=20 mg/kg Dermal LD50 Rabbit	eyes skin CNS CVS kidneys

Inhalation: No additional data available

Product number: 04657420190

Page 2 of 4

Product name: Creatine Kinase, CKL

Skin: No additional data available
Oral: No additional data available
Mutagenic effects: No data is available on the product itself
Reproductive toxicity: No data is available on the product itself

12. ECOLOGICAL INFORMATION

Bioaccumulation: Not determined
Aquatic toxicity: No data is available on the product itself
Ecotoxicity effects: No data is available on the product itself

U.S. EPA, RCRA, CERCLA, SARA, or DGC information on persistent, bioaccumulative, and toxic chemicals (PBTs):

The following chemicals are listed under the U.S. EPA regulations of RCRA, CERCLA, SARA, or DGC:

13. DISPOSAL CONSIDERATIONS

Waste from residues / unused products: Waste disposal must be in accordance with appropriate Federal, State, and local regulations. This product, if unaltered by use, may be disposed of by treatment at a permitted facility or as advised by your local hazardous waste regulatory authority. Residue from fires extinguished with this material may be hazardous

14. TRANSPORT INFORMATION

Is product hazardous to ship? No
DOT

Proper shipping name: None

UN Number: Not applicable **Hazard class:** Not applicable **Subsidiary risk:** Not applicable **Packing group:** Not applicable

ICAO/IATA

Proper shipping name: None

UN Number: Not applicable **Hazard class:** Not applicable **Subsidiary risk:** Not applicable **Packing group:** Not applicable

15. REGULATORY INFORMATION

U.S. Regulations:

U.S. CERCLA/SARA/TSCA Regulatory Information: The following chemicals are listed under the following TSCA/SARA/CERCLA lists. Refer to TSCA regulation if you need a definition for acronyms that may be shown in the TSCA Inventory field in the table below

Components	CERCLA/SARA 302 RQ and TPQ (40 CFR 355, App.A)	CERCLA/SARA 304 RQ (40 CFR Table 302.4)	SARA 313 Emission reporting	TSCA Inventory
Imidazole				Present
Potassium chloride				Present

Components	CERCLA/SARA 302 RQ and TPQ (40 CFR 355, App.A)	CERCLA/SARA 304 RQ (40 CFR Table 302.4)	SARA 313 Emission reporting	TSCA Inventory
D-Sorbitol				Present
Sodium azide	=500 lb TPQ This material is a reactive solid. The TPQ does not default to 10000 pounds for non-powder, non-molten, non-solution form	=454 kg final RQ	Listed	Present

U.S. Clean Water Act (CWA)/ California Proposition 65: The following chemicals are listed under the CWA and/or California Proposition 65:

Canadian Regulations:

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

Product number: 04657420190

Page 3 of 4

Product name: Creatine Kinase, CKL

Components	Canada - WHMIS: Classifications of Substances:
Potassium chloride	Uncontrolled product according to WHMIS classification criteria

Components	Canada - WHMIS: Classifications of Substances:
Sodium azide	D1A

16. OTHER INFORMATION

Reason for revision: Not applicable
References: None
Additional advice: None
Prepared by: Roche Diagnostics, Health & Safety Department, MSDS Contact: 317-521-7425 or 317-521-7505

The information, data and recommendations contained herein are based upon information believed by Roche Diagnostics Operations after reasonable investigation and research, to be accurate; however, Roche Diagnostics Operations does not warrant the accuracy of this information. All materials and mixtures may present unknown hazards and should be used with caution. When necessary or appropriate, independent opinions regarding the risk of handling or exposure should be obtained from trained professionals. Roche Diagnostics Operations disclaims any warranty against patent infringement and the implied warranties of merchantability and fitness for a particular purpose. Customer's sole and exclusive remedy shall be replacement of the product or return of the product and refund of the purchase price, at Roche Diagnostics Operations's option. In no case shall Roche Diagnostics Operations be liable for incidental or consequential damages, including lost profits.

End of Safety Data Sheet

SAFETY DATA SHEET

Roche

CKL

Version
1.1

Revision Date:
12-16-2015

Date of last issue: 12-14-2015
Date of first issue: 12-14-2015

SECTION 1. IDENTIFICATION

Product name : CKL
Mat.-No./ Genisys-No. : 05401593190

Manufacturer or supplier's details

Company name of supplier : Roche Diagnostics

Address : 9115 Hague Road
46250 Indianapolis IN

Telephone : 1-800-428-5074

Emergency telephone:

In case of emergencies : CHEMTREC 1-800-424-9300 (U.S. or Canada)
1-703-527-3887 (International)

Recommended use of the chemical and restrictions on use

Restrictions on use : For professional users only.

SECTION 2. HAZARDS IDENTIFICATION

GHS Classification

The product is a kit consisting of individual ingredients. The classification of the ingredients can be obtained from section 3. Section Label elements contains the resulting labelling for the kit

GHS Label element

Hazard pictograms :



Signal Word : Danger

Hazard Statements : H360 May damage fertility or the unborn child.

Precautionary Statements : **Prevention:**
P201 Obtain special instructions before use.
P202 Do not handle until all safety precautions have been read and understood.
P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.
Response:
P308 + P313 IF exposed or concerned: Get medical advice/ attention.
Storage:
P405 Store locked up.
Disposal:
P501 Dispose of contents/ container to an approved waste disposal plant.

CKLVersion
1.1Revision Date:
12-16-2015Date of last issue: 12-14-2015
Date of first issue: 12-14-2015**Other hazards**

None known.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS**R1 (A / B)****GHS Classification**Reproductive toxicity
Category 1A

H360: May damage fertility or the unborn child.

Hazardous ingredients

Chemical Name	CAS-No.	Concentration (% w/w)
Imidazole	288-32-4	≥ 0.1 - < 1

R2 (C)**GHS Classification**

Not a hazardous substance or mixture.

Hazardous ingredients

No hazardous ingredients

SECTION 4. FIRST AID MEASURES

- General advice : Move out of dangerous area.
Show this material safety data sheet to the doctor in attendance.
Do not leave the victim unattended.
- If inhaled : Move to fresh air.
If unconscious place in recovery position and seek medical advice.
If symptoms persist, call a physician.
- In case of skin contact : If on skin, rinse well with water.
- In case of eye contact : Immediately flush eye(s) with plenty of water.
Remove contact lenses.
Protect unharmed eye.
Keep eye wide open while rinsing.
If eye irritation persists, consult a specialist.
- If swallowed : Keep respiratory tract clear.
Do not give milk or alcoholic beverages.
Never give anything by mouth to an unconscious person.
If symptoms persist, call a physician.
Take victim immediately to hospital.
Rinse mouth with water.
- Most important symptoms : No information available.

CKLVersion
1.1Revision Date:
12-16-2015Date of last issue: 12-14-2015
Date of first issue: 12-14-2015

and effects, both acute and delayed

Notes to physician : The first aid procedure should be established in consultation with the doctor responsible for industrial medicine.

SECTION 5. FIRE-FIGHTING MEASURES

- Suitable extinguishing media : Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
- Unsuitable extinguishing media : High volume water jet
- Specific hazards during fire fighting : Do not allow run-off from fire fighting to enter drains or water courses.
- Further information : Collect contaminated fire extinguishing water separately. This must not be discharged into drains.
Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.
- Special protective equipment for fire-fighters : Wear self-contained breathing apparatus for firefighting if necessary.

SECTION 6. ACCIDENTAL RELEASE MEASURES

- Personal precautions, protective equipment and emergency procedures : Use personal protective equipment.
Refer to protective measures listed in sections 7 and 8.
- Environmental precautions : Prevent product from entering drains.
Prevent further leakage or spillage if safe to do so.
Local authorities should be advised if significant spillages cannot be contained.
- Methods and materials for containment and cleaning up : Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust).
Keep in suitable, closed containers for disposal.

SECTION 7. HANDLING AND STORAGE

- Advice on protection against fire and explosion : Normal measures for preventive fire protection.
- Advice on safe handling : Do not breathe vapors/dust.
Avoid exposure - obtain special instructions before use.
Avoid contact with skin and eyes.
For personal protection see section 8.
Smoking, eating and drinking should be prohibited in the application area.
Dispose of rinse water in accordance with local and national regulations.

CKLVersion
1.1Revision Date:
12-16-2015Date of last issue: 12-14-2015
Date of first issue: 12-14-2015

- Conditions for safe storage : Keep container tightly closed in a dry and well-ventilated place.
Observe label precautions.
Electrical installations / working materials must comply with the technological safety standards.
- Technical measures/Precautions : See label, package insert or internal guidelines

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION**R1 (A / B)****Ingredients with workplace control parameters**

Contains no substances with occupational exposure limit values.

Hazardous components without workplace control parameters

Ingredients	CAS-No.
Imidazole	288-32-4

R2 (C)**Ingredients with workplace control parameters**

Contains no substances with occupational exposure limit values.

Engineering measures : No data available**Personal protective equipment**

Respiratory protection : In the case of vapor formation use a respirator with an approved filter.

Hand protection

Material : Protective gloves

Remarks : Wear appropriate protective gloves to prevent skin contact.
Replace torn or punctured gloves promptly.Eye protection : Eye wash bottle with pure water
Tightly fitting safety gogglesSkin and body protection : Impervious clothing
Choose body protection according to the amount and concentration of the dangerous substance at the work place.Hygiene measures : When using do not eat or drink.
When using do not smoke.
Wash hands before breaks and at the end of workday.**SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES****R1 (A / B)**

Appearance : liquid

SAFETY DATA SHEET



CKL

Version
1.1

Revision Date:
12-16-2015

Date of last issue: 12-14-2015
Date of first issue: 12-14-2015

Color	: No data available
Odor	: No data available
Odor Threshold	: No data available
pH	: 6.0
Melting point/range	: No data available
Boiling point/boiling range	: No data available
Flash point	: does not flash
Evaporation rate	: No data available
Upper explosion limit	: No data available
Lower explosion limit	: No data available
Vapor pressure	: No data available
Relative vapor density	: No data available
Relative density	: No data available
Density	: 1.01 g/cm ³
Solubility(ies)	
Water solubility	: completely miscible
Solubility in other solvents	: No data available
Partition coefficient: n-octanol/water	: No data available
Autoignition temperature	: No data available
Decomposition temperature	: No data available
Viscosity	
Viscosity, dynamic	: No data available
Viscosity, kinematic	: No data available
Oxidizing properties	: The substance or mixture is not classified as oxidizing.

R2 (C)

Appearance	: liquid
Color	: No data available
Odor	: No data available

SAFETY DATA SHEET



CKL

Version
1.1

Revision Date:
12-16-2015

Date of last issue: 12-14-2015
Date of first issue: 12-14-2015

Odor Threshold	: No data available
pH	: 9.0
Melting point/range	: No data available
Boiling point/boiling range	: No data available
Flash point	: does not flash
Evaporation rate	: No data available
Upper explosion limit	: No data available
Lower explosion limit	: No data available
Vapor pressure	: No data available
Relative vapor density	: No data available
Relative density	: No data available
Density	: 1.137 g/cm ³
Solubility(ies)	
Water solubility	: completely miscible
Solubility in other solvents	: No data available
Partition coefficient: n-octanol/water	: No data available
Autoignition temperature	: No data available
Decomposition temperature	: No data available
Viscosity	
Viscosity, dynamic	: No data available
Viscosity, kinematic	: No data available
Oxidizing properties	: The substance or mixture is not classified as oxidizing.

SECTION 10. STABILITY AND REACTIVITY

Reactivity	: No dangerous reaction known under conditions of normal use.
Chemical stability	: Stable under normal conditions.
Possibility of hazardous reactions	: No decomposition if stored and applied as directed.
Conditions to avoid	: No data available

CKLVersion
1.1Revision Date:
12-16-2015Date of last issue: 12-14-2015
Date of first issue: 12-14-2015

Incompatible materials : No data available

Hazardous decomposition products : No data available

SECTION 11. TOXICOLOGICAL INFORMATION**R1 (A / B)****Acute toxicity**

Not classified based on available information.

Ingredients:**Imidazole:**

Acute oral toxicity : LD50 Oral (Rat): 970 mg/kg

Skin corrosion/irritation

Not classified based on available information.

Ingredients:**Imidazole:**

Result: Causes burns.

Remarks: Extremely corrosive and destructive to tissue.

Serious eye damage/eye irritation

Not classified based on available information.

Ingredients:**Imidazole:**

Remarks: May cause irreversible eye damage.

Respiratory or skin sensitization

Skin sensitization: Not classified based on available information.

Respiratory sensitization: Not classified based on available information.

Germ cell mutagenicity

Not classified based on available information.

Carcinogenicity

Not classified based on available information.

IARC

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

OSHA

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

NTP

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

Reproductive toxicity

May damage fertility or the unborn child.

CKLVersion
1.1Revision Date:
12-16-2015Date of last issue: 12-14-2015
Date of first issue: 12-14-2015**Ingredients:****Imidazole:**

Reproductive toxicity - Assessment : May damage the unborn child., Known human reproductive toxicant

STOT-single exposure

Not classified based on available information.

STOT-repeated exposure

Not classified based on available information.

Aspiration toxicity

Not classified based on available information.

R2 (C)**Acute toxicity**

Not classified based on available information.

Skin corrosion/irritation

Not classified based on available information.

Serious eye damage/eye irritation

Not classified based on available information.

Respiratory or skin sensitization

Skin sensitization: Not classified based on available information.

Respiratory sensitization: Not classified based on available information.

Germ cell mutagenicity

Not classified based on available information.

Carcinogenicity

Not classified based on available information.

IARC

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

OSHA

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

NTP

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

Reproductive toxicity

Not classified based on available information.

STOT-single exposure

Not classified based on available information.

STOT-repeated exposure

Not classified based on available information.

Aspiration toxicity

Not classified based on available information.

CKLVersion
1.1Revision Date:
12-16-2015Date of last issue: 12-14-2015
Date of first issue: 12-14-2015**SECTION 12. ECOLOGICAL INFORMATION****R1 (A / B)****Ecotoxicity****Ingredients:****Imidazole:**

- Toxicity to fish : LC50 (Leuciscus idus (Golden orfe)): 100 - 500 mg/l
Exposure time: 48 h
- Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): 341.5 mg/l
Exposure time: 48 h
- Toxicity to algae : IC50 (Desmodesmus subspicatus (green algae)): 130 mg/l
Exposure time: 72 h
- Toxicity to bacteria : EC50 (Pseudomonas putida): 1,200 mg/l
Exposure time: 17 h
- Ecotoxicology Assessment
Acute aquatic toxicity : This product has no known ecotoxicological effects.
- Chronic aquatic toxicity : This product has no known ecotoxicological effects.
- Toxicity Data on Soil : Not expected to adsorb on soil.
- Other organisms relevant to the environment : No data available

Persistence and degradability**Ingredients:****Imidazole:**

- Biodegradability : Biodegradation: 83 %
Exposure time: 8 d
Method: OECD Test Guideline 302

Bioaccumulative potential**Ingredients:****Imidazole:**

- Partition coefficient: n-octanol/water : log Pow: -0.02
Method: OECD Test Guideline 107

Mobility in soil

No data available

Other adverse effects**Ingredients:****Imidazole:**

- Additional ecological infor- : No data available

CKLVersion
1.1Revision Date:
12-16-2015Date of last issue: 12-14-2015
Date of first issue: 12-14-2015

mation

R2 (C)**Ecotoxicity**

No data available

Persistence and degradability

No data available

Bioaccumulative potential

No data available

Mobility in soil

No data available

Other adverse effects**SECTION 13. DISPOSAL CONSIDERATIONS****Disposal methods**

- | | | |
|------------------------|---|---|
| Waste from residues | : | Do not contaminate ponds, waterways or ditches with chemical or used container.
Send to a licensed waste management company.
Can be disposed as waste water, when in compliance with local regulations. |
| Contaminated packaging | : | Empty remaining contents.
Dispose of as unused product.
Empty containers should be taken to an approved waste handling site for recycling or disposal.
Do not re-use empty containers. |

SECTION 14. TRANSPORT INFORMATION**International Regulation****UNRTDG**

Not regulated as a dangerous good

IATA-DGR

Not regulated as a dangerous good

IMDG-Code

Not regulated as a dangerous good

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable for product as supplied.

Domestic regulation**49 CFR**

Not regulated as a dangerous good

CKLVersion
1.1Revision Date:
12-16-2015Date of last issue: 12-14-2015
Date of first issue: 12-14-2015**SECTION 15. REGULATORY INFORMATION****R1 (A / B)****EPCRA - Emergency Planning and Community Right-to-Know****CERCLA Reportable Quantity**

Ingredients	CAS-No.	Component RQ (lbs)	Component RQ (lbs)
Sodium hydroxide	1310-73-2	1000	*

*: Calculated RQ exceeds reasonably attainable upper limit.

SARA 304 Extremely Hazardous Substances Reportable Quantity

This material does not contain any components with a section 304 EHS RQ.

SARA 311/312 Hazards : Chronic Health Hazard**SARA 302** : No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.**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.**Clean Air Act**

This product neither contains, nor was manufactured with a Class I or Class II ODS as defined by the U.S. Clean Air Act Section 602 (40 CFR 82, Subpt. A, App.A + B).

This product does not contain any hazardous air pollutants (HAP), as defined by the U.S. Clean Air Act Section 12 (40 CFR 61).

This product does not contain any chemicals listed under the U.S. Clean Air Act Section 112(r) for Accidental Release Prevention (40 CFR 68.130, Subpart F).

This product does not contain any chemicals listed under the U.S. Clean Air Act Section 111 SOCM Intermediate or Final VOC's (40 CFR 60.489).

Clean Water Act

The following Hazardous Substances are listed under the U.S. CleanWater Act, Section 311, Table 116.4A:

Acetic acid	64-19-7	0.0099 %
Sodium hydroxide	1310-73-2	0.0099 %

The following Hazardous Chemicals are listed under the U.S. CleanWater Act, Section 311, Table 117.3:

Acetic acid	64-19-7	0.0099 %
Sodium hydroxide	1310-73-2	0.0099 %

This product does not contain any toxic pollutants listed under the U.S. Clean Water Act Section 307

US State Regulations**Massachusetts Right To Know**

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

Pennsylvania Right To Know

Water	7732-18-5	90 - 100 %
-------	-----------	------------

SAFETY DATA SHEET

**CKL**Version
1.1Revision Date:
12-16-2015Date of last issue: 12-14-2015
Date of first issue: 12-14-2015**New Jersey Right To Know**

Water

7732-18-5

90 - 100 %

California Prop. 65

WARNING: This product contains a chemical known in the State of California to cause birth defects or other reproductive harm.

Methanol

67-56-1

The ingredients of this product are reported in the following inventories:

CH INV

: Not in compliance with the inventory
Dextrose
Magnesium di(acetate)Tetrahydrate
Adenosine-5'monophosphate (AMP), disodium salt

TSCA

: Not On TSCA Inventory
Dextrose
NADP,Di-Na
Magnesium di(acetate)Tetrahydrate
Adenosine-5'monophosphate (AMP), disodium salt
Adenosine 5'-(hexahydrogen pentaphosphate), 5'5'-ester with adenosine, trilithium salt

DSL

: This product contains the following components that are not on the Canadian DSL nor NDSL.
Dextrose
NADP,Di-Na
Magnesium di(acetate)Tetrahydrate
Adenosine-5'monophosphate (AMP), disodium salt

AICS

: Not in compliance with the inventory
NADP,Di-Na
Adenosine-5'monophosphate (AMP), disodium salt
Adenosine 5'-(hexahydrogen pentaphosphate), 5'5'-ester with adenosine, trilithium salt

NZIoC

: Not in compliance with the inventory
Acetic acid

ENCS

: Not in compliance with the inventory
Water
Dextrose
NADP,Di-Na
Magnesium di(acetate)Tetrahydrate
1,4-Dithioerythrite
Adenosine-5'monophosphate (AMP), disodium salt
Adenosine 5'-(hexahydrogen pentaphosphate), 5'5'-ester with adenosine, trilithium salt

ISHL

: Not in compliance with the inventory
Dextrose
NADP,Di-Na
Magnesium di(acetate)Tetrahydrate
1,4-Dithioerythrite
Adenosine-5'monophosphate (AMP), disodium salt
Adenosine 5'-(hexahydrogen pentaphosphate), 5'5'-ester with adenosine, trilithium salt

SAFETY DATA SHEET



CKL

Version
1.1

Revision Date:
12-16-2015

Date of last issue: 12-14-2015
Date of first issue: 12-14-2015

- KECI : Not in compliance with the inventory
Dextrose
NADP,Di-Na
Magnesium di(acetate)Tetrahydrate
1,4-Dithioerythrite
Adenosine-5'monophosphate (AMP), disodium salt
Adenosine 5'-(hexahydrogen pentaphosphate), 5'5'-ester with adenosine, trilithium salt
- PICCS : Not in compliance with the inventory
NADP,Di-Na
1,4-Dithioerythrite
Adenosine-5'monophosphate (AMP), disodium salt
Adenosine 5'-(hexahydrogen pentaphosphate), 5'5'-ester with adenosine, trilithium salt
- IECSC : Not in compliance with the inventory
Adenosine-5'monophosphate (AMP), disodium salt
Adenosine 5'-(hexahydrogen pentaphosphate), 5'5'-ester with adenosine, trilithium salt

TSCA list

No substances are subject to a Significant New Use Rule.

No substances are subject to TSCA 12(b) export notification requirements.

R2 (C)

EPCRA - Emergency Planning and Community Right-to-Know

CERCLA Reportable Quantity

Ingredients	CAS-No.	Component RQ (lbs)	Component RQ (lbs)
Sodium azide	26628-22-8	1000	*

*: Calculated RQ exceeds reasonably attainable upper limit.

SARA 304 Extremely Hazardous Substances Reportable Quantity

Ingredients	CAS-No.	Component RQ (lbs)	Calculated product RQ (lbs)
Sodium azide	26628-22-8	1000	*

*: Calculated RQ exceeds reasonably attainable upper limit.

SARA 311/312 Hazards : No SARA Hazards

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

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.

Clean Air Act

SAFETY DATA SHEET



CKL

Version
1.1

Revision Date:
12-16-2015

Date of last issue: 12-14-2015
Date of first issue: 12-14-2015

This product neither contains, nor was manufactured with a Class I or Class II ODS as defined by the U.S. Clean Air Act Section 602 (40 CFR 82, Subpt. A, App.A + B).

This product does not contain any hazardous air pollutants (HAP), as defined by the U.S. Clean Air Act Section 12 (40 CFR 61).

This product does not contain any chemicals listed under the U.S. Clean Air Act Section 112(r) for Accidental Release Prevention (40 CFR 68.130, Subpart F).

This product does not contain any chemicals listed under the U.S. Clean Air Act Section 111 SOCM Intermediate or Final VOC's (40 CFR 60.489).

Clean Water Act

The following Hazardous Substances are listed under the U.S. CleanWater Act, Section 311, Table 116.4A:

Acetic acid	64-19-7	0.0099 %
Sodium hydroxide	1310-73-2	0.0099 %

The following Hazardous Chemicals are listed under the U.S. CleanWater Act, Section 311, Table 117.3:

Acetic acid	64-19-7	0.0099 %
Sodium hydroxide	1310-73-2	0.0099 %

This product does not contain any toxic pollutants listed under the U.S. Clean Water Act Section 307

US State Regulations

Massachusetts Right To Know

Sodium azide	26628-22-8	0 - 0.1 %
--------------	------------	-----------

Pennsylvania Right To Know

Water	7732-18-5	70 - 90 %
D-Sorbitol	50-70-4	20 - 30 %
Sodium azide	26628-22-8	0 - 0.1 %

New Jersey Right To Know

Water	7732-18-5	70 - 90 %
D-Sorbitol	50-70-4	20 - 30 %
phosphocreatine, sodium salt	922-32-7	1 - 5 %

California Prop. 65

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

The ingredients of this product are reported in the following inventories:

CH INV : Not in compliance with the inventory
Adenosine-5'-diphosphate (ADP) monopotassium salt dihydrate
Triton XL 80 N

TSCA : Not On TSCA Inventory
phosphocreatine, sodium salt
Adenosine-5'-diphosphate (ADP) monopotassium salt dihydrate

DSL : This product contains the following components that are not on the Canadian DSL nor NDSL.
Adenosine-5'-diphosphate (ADP) monopotassium salt dihydrate
Hexokinase (HK)
Dehydrogenase, glucose 6-phosphate

SAFETY DATA SHEET



CKL

Version
1.1

Revision Date:
12-16-2015

Date of last issue: 12-14-2015
Date of first issue: 12-14-2015

	phosphocreatine, sodium salt
AICS	: Not in compliance with the inventory Adenosine-5'-diphosphate (ADP) monopotassium salt dihydrate
NZIoC	: On the inventory, or in compliance with the inventory
ENCS	: Not in compliance with the inventory Water phosphocreatine, sodium salt Adenosine-5'-diphosphate (ADP) monopotassium salt dihydrate Hexokinase (HK) Triton XL 80 N Dehydrogenase, glucose 6-phosphate
ISHL	: Not in compliance with the inventory phosphocreatine, sodium salt Adenosine-5'-diphosphate (ADP) monopotassium salt dihydrate Hexokinase (HK) Triton XL 80 N Dehydrogenase, glucose 6-phosphate
KECI	: Not in compliance with the inventory phosphocreatine, sodium salt Adenosine-5'-diphosphate (ADP) monopotassium salt dihydrate Hexokinase (HK)
PICCS	: Not in compliance with the inventory phosphocreatine, sodium salt Adenosine-5'-diphosphate (ADP) monopotassium salt dihydrate Hexokinase (HK)
IECSC	: Not in compliance with the inventory Adenosine-5'-diphosphate (ADP) monopotassium salt dihydrate Hexokinase (HK)

TSCA list

No substances are subject to a Significant New Use Rule.

No substances are subject to TSCA 12(b) export notification requirements.

R1 (A / B)

SAFETY DATA SHEET

Roche

CKL

Version
1.1

Revision Date:
12-16-2015

Date of last issue: 12-14-2015
Date of first issue: 12-14-2015

GHS Label element

Hazard pictograms

:



Signal Word

: Danger

Hazard Statements

: H360 May damage fertility or the unborn child.

Precautionary Statements

: **Prevention:**

P201 Obtain special instructions before use.

P202 Do not handle until all safety precautions have been read and understood.

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

Response:

P308 + P313 IF exposed or concerned: Get medical advice/ attention.

Storage:

P405 Store locked up.

Disposal:

P501 Dispose of contents/ container to an approved waste disposal plant.

R2 (C)

GHS Label element

Not a hazardous substance or mixture.

SECTION 16. OTHER INFORMATION

Full text of other abbreviations

(Q)SAR - (Quantitative) Structure Activity Relationship; ASTM - American Society for the Testing of Materials; bw - Body weight; DIN - Standard of the German Institute for Standardisation; ECx - Concentration associated with x% response; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ErCx - Concentration associated with x% growth rate response; GHS - Globally Harmonized System; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; ISO - International Organisation for Standardization; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; n.o.s. - Not Otherwise Specified; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; SADT - Self-Accelerating Decomposition Temperature; SDS - Safety Data Sheet; UN - United Nations; vPvB - Very Persistent and Very Bioaccumulative; DSL - Domestic Substances List (Canada); KECI - Korea Existing Chemicals Inventory; TSCA - Toxic Substances Control Act (United States); AICS - Australian Inventory of Chemical Substances; IECSC - Inventory of Exist-

SAFETY DATA SHEET

Roche

CKL

Version
1.1

Revision Date:
12-16-2015

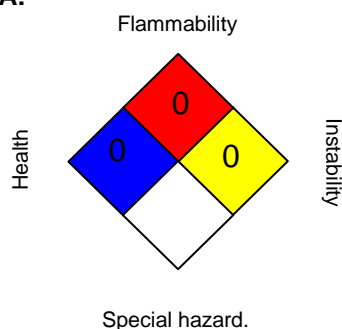
Date of last issue: 12-14-2015
Date of first issue: 12-14-2015

ing Chemical Substances in China; ENCS - Existing and New Chemical Substances (Japan); ISHL - Industrial Safety and Health Law (Japan); PICCS - Philippines Inventory of Chemicals and Chemical Substances; NZIoC - New Zealand Inventory of Chemicals; TCSI - Taiwan Chemical Substance Inventory; CERCLA - Comprehensive Environmental Response, Compensation, and Liability Act; DOT - Department of Transportation; EHS - Extremely Hazardous Substance; HMIS - Hazardous Materials Identification System; MSHA - Mine Safety and Health Administration; NFPA - National Fire Protection Association; RCRA - Resource Conservation and Recovery Act; RQ - Reportable Quantity; SARA - Superfund Amendments and Reauthorization Act; CMR - Carcinogen, Mutagen or Reproductive Toxicant; GLP - Good Laboratory Practice; ERG - Emergency Response Guide; NTP - National Toxicology Program; UNRTDG - United Nations Recommendations on the Transport of Dangerous Goods

Further information

R1 (A / B)

NFPA:



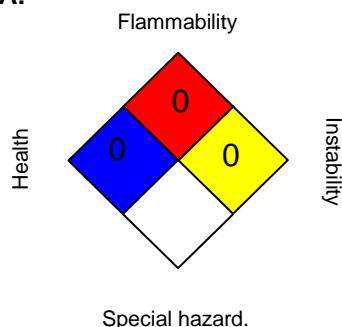
HMIS III:

HEALTH	0*
FLAMMABILITY	1
PHYSICAL HAZARD	0

0 = not significant, 1 =Slight,
2 = Moderate, 3 = High
4 = Extreme, * = Chronic

R2 (C)

NFPA:



HMIS III:

HEALTH	0
FLAMMABILITY	0
PHYSICAL HAZARD	0

0 = not significant, 1 =Slight,
2 = Moderate, 3 = High
4 = Extreme, * = Chronic

Revision Date : 12-16-2015

The information provided in this Material 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.

SAFETY DATA SHEET



CKL

Version
1.1

Revision Date:
12-16-2015

Date of last issue: 12-14-2015
Date of first issue: 12-14-2015

US / Z8