Material Safety Data Sheet

SIEMENS

ICTOTEST Tablets MSDS no. 2591

1 . Product and company identification

Product name : ICTOTEST Tablets

Code : 2591

Material uses : Diagnostic Agents

Product type : Solid.

Manufactured/supplied : Siemens Healthcare Diagnostics Inc.
1717 Deerfield Road
Deerfield, IL 60015-0778
1-847-267-5300

Siemens Healthcare Diagnostics Ltd.
1200 Courtneypark Drive East
Mississauga, Ontario, Canada
L5T-1P2
(905) 564-7333
(800) 264-0083

In case of emergency : Transportation: (800) 424-9300 (CHEMTREC)
Medical: (800) 228-5635 ext. 284 (Prosar)

2 . Hazards identification

Physical state : Solid.

Odor : Odorless.

OSHA/HCS status : This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

Emergency overview : CONTAINS MATERIAL THAT CAN CAUSE TARGET ORGAN DAMAGE.
Contains material that can cause target organ damage.
Not available.

Potential acute health effects

Inhalation : No known significant effects or critical hazards.

Ingestion : No known significant effects or critical hazards.

Skin : No known significant effects or critical hazards.

Eyes : No known significant effects or critical hazards.

Potential chronic health effects

Chronic effects : Contains material that can cause target organ damage.

Carcinogenicity : No known significant effects or critical hazards.

Mutagenicity : No known significant effects or critical hazards.

Teratogenicity : No known significant effects or critical hazards.

Developmental effects : No known significant effects or critical hazards.

Fertility effects : No known significant effects or critical hazards.

Over-exposure signs/symptoms

Inhalation : No specific data.

Ingestion : No specific data.

Skin : No specific data.

Eyes : No specific data.

See toxicological information (section 11)

3 . Composition/information on ingredients

United States

Name	CAS number	%
boric acid	10043-35-3	7.6
sodium hydrogencarbonate	144-55-8	3.8

Canada

Name	CAS number	%
boric acid	10043-35-3	7.6
sodium hydrogencarbonate	144-55-8	3.8

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

4 . First aid measures

Eye contact : Check for and remove any contact lenses. Immediately flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical attention immediately.

Skin contact : In case of contact, immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Wash clothing before reuse. Clean shoes thoroughly before reuse. Get medical attention immediately.

Inhalation : Move exposed person to fresh air. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. Loosen tight clothing such as a collar, tie, belt or waistband. Get medical attention immediately.

Ingestion : Wash out mouth with water. Do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Get medical attention immediately.

5 . Fire-fighting measures

Flammability of the product : No specific fire or explosion hazard.

Extinguishing media

In case of fire, use water spray (fog), foam or dry chemical.

Not suitable : None known.

Special exposure hazards : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.

Hazardous combustion products : Decomposition products may include the following materials:
carbon dioxide
carbon monoxide
metal oxide/oxides

Special protective equipment for fire-fighters : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

6 . Accidental release measures

Personal precautions : No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment (see section 8).

Environmental precautions : Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

Small spill : Move containers from spill area. Vacuum or sweep up material and place in a designated, labeled waste container. Dispose of via a licensed waste disposal contractor.

7 . Handling and storage

Handling : Put on appropriate personal protective equipment (see section 8). Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Do not ingest. Avoid contact with eyes, skin and clothing. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Empty containers retain product residue and can be hazardous. Do not reuse container.

Storage : Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination.

8 . Exposure controls/personal protection

Product name	Exposure limits
United States	
boric acid	**ACGIH TLV (United States, 1/2008).** STEL: 6 mg/m³ 15 minute(s). TWA: 2 mg/m³ 8 hour(s).
Canada	
boric acid	**CA British Columbia Provincial (Canada, 7/2007).** TWA: 2 mg/m³ 8 hour(s). Form: Inhalable STEL: 6 mg/m³ 15 minute(s). Form: Inhalable **CA Ontario Provincial (Canada, 3/2007).** TWAEV: 2 mg/m³ 8 hour(s). Form: The notation “inhalable” following the name of an agent in this Schedule means that size fraction of the airborne particulate deposited anywhere in the respiratory tract and collected during air sampling with a particle size-selective device that, (a) meets the American Conference of Governmental Industrial Hygienists (ACGIH) particle size-selective criteria; and (b) has the cut point of 100 microns at 50 per cent collective efficiency. STEV: 6 mg/m³ 15 minute(s). Form: The notation “inhalable” following the name of an agent in this Schedule means that size fraction of the airborne particulate deposited anywhere in the respiratory tract and collected during air sampling with a particle size-selective device that, (a) meets the American Conference of Governmental Industrial Hygienists (ACGIH) particle size-selective criteria; and (b) has the cut point of 100 microns at 50 per cent collective efficiency.

Consult local authorities for acceptable exposure limits.

Recommended monitoring procedures : If this product contains ingredients with exposure limits, personal, workplace atmosphere or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment.

Engineering measures : No special ventilation requirements. Good general ventilation should be sufficient to control worker exposure to airborne contaminants. If this product contains ingredients with exposure limits, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure below any recommended or statutory limits.

Hygiene measures : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

Personal protection

8 . Exposure controls/personal protection

Respiratory : Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.

Hands : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary.

Eyes : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists or dusts.

Skin : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Environmental exposure controls : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

9 . Physical and chemical properties

Physical state : Solid.

Color : White.

Odor : Odorless.

10 . Stability and reactivity

Stability : The product is stable.

Conditions to avoid : No specific data.

Materials to avoid : No specific data.

Not available.

Hazardous decomposition products : Under normal conditions of storage and use, hazardous decomposition products should not be produced.

Hazardous polymerization : Under normal conditions of storage and use, hazardous polymerization will not occur.

Conditions of reactivity

Flammability : Non-flammable in the presence of the following materials or conditions: open flames, sparks and static discharge and heat.

Explosibility : Explosive in the presence of the following materials or conditions: open flames, sparks and static discharge.

11 . Toxicological information

United States

Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
sodium hydrogencarbonate	LD50 Oral	Rat	4220 mg/kg	-

Chronic toxicity

Not available.

Carcinogenicity

Not available.

Classification

Product/ingredient name	ACGIH	IARC	EPA	NIOSH	NTP	OSHA
boric acid	A4	-	-	None.	-	-
sodium hydrogencarbonate	-	-	-	None.	-	-

Mutagenicity

11 . Toxicological information

Not available.

Teratogenicity

Not available.

Reproductive toxicity

Not available.

Canada

Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
sodium hydrogencarbonate	LD50 Oral	Rat	4220 mg/kg	-

Chronic toxicity

Not available.

Carcinogenicity

Not available.

Classification

Product/ingredient name	ACGIH	IARC	EPA	NIOSH	NTP	OSHA
boric acid	A4	-	-	None.	-	-
sodium hydrogencarbonate	-	-	-	None.	-	-

Mutagenicity

Not available.

Teratogenicity

Not available.

Reproductive toxicity

Not available.

12 . Ecological information

Environmental effects : No known significant effects or critical hazards.

United States

Aquatic ecotoxicity

Product/ingredient name	Test	Result	Species	Exposure
boric acid	-	Acute EC50 777 to 932 ppm Fresh water	Daphnia - Water flea - Daphnia magna - <24 hours	48 hours
	-	Acute EC50 226 to 246 ppm Fresh water	Daphnia - Water flea - Daphnia magna - <24 hours	48 hours
	-	Acute EC50 133 to 153 ppm Fresh water	Daphnia - Water flea - Daphnia magna - <24 hours	48 hours
	-	Acute LC50 >1100 ppm Fresh water	Fish - Rainbow trout,donaldson trout - Oncorhynchus mykiss	96 hours
	-	Acute LC50 >1021 ppm Fresh water	Fish - Bluegill - Lepomis macrochirus	96 hours
	-	Acute LC50 >800 ppm Fresh water	Fish - Rainbow trout,donaldson	96 hours

12 . Ecological information

			trout - Oncorhynchus mykiss	
	-	Acute LC50 92.83 to 148 mg/L Marine water	Crustaceans - Opossum shrimp - Americamysis bahia - Juvenile (Fledgling, Hatchling, Weanling) - <24 hours	48 hours
	-	Acute LC50 89.07 to 100.7 mg/L Marine water	Crustaceans - Opossum shrimp - Americamysis bahia - Juvenile (Fledgling, Hatchling, Weanling) - <24 hours	48 hours
	-	Acute LC50 5600 ppm Fresh water	Fish - Western mosquitofish - Gambusia affinis - Adult	96 hours
	-	Acute LC50 50 to 100 ppm Fresh water	Fish - Rainbow trout,donaldson trout - Oncorhynchus mykiss	96 hours
	-	Acute LC50 >100000 ug/L Fresh water	Fish - Colorado squawfish - Ptychocheilus lucius - Juvenile (Fledgling, Hatchling, Weanling) - 99 to 115 days - 0.4 to 1.1 g	96 hours
	-	Acute LC50 233000 to 293000 ug/L Fresh water	Fish - Razorback sucker - Xyrauchen texanus - Swim-up - 10 to 17 days	96 hours
	-	Acute LC50 125000 to 162000 ug/L Fresh water	Fish - Flannelmouth sucker - Catostomus latipinnis - LARVAE - 12 to 13 days	96 hours
sodium hydrogencarbonate	-	Acute LC50 9000000 ug/L Fresh water	Fish - Bluegill - Lepomis macrochirus - 14.24 cm - 54.26 g	96 hours
	-	Acute LC50 8600000 ug/L Fresh water	Fish - Bluegill - Lepomis macrochirus	96 hours
	-	Acute LC50 8250000 ug/L Fresh water	Fish - Bluegill - Lepomis macrochirus - 3.88 cm - 0.96 g	96 hours

12 . Ecological information

	-	Acute LC50 7550000 ug/L Fresh water	Fish - Western mosquitofish - Gambusia affinis - Adult	96 hours

Biodegradability

Not available.

Canada

Aquatic ecotoxicity

Product/ingredient name	Test	Result	Species	Exposure
boric acid	-	Acute EC50 777 to 932 ppm Fresh water	Daphnia - Water flea - Daphnia magna - <24 hours	48 hours
	-	Acute EC50 226 to 246 ppm Fresh water	Daphnia - Water flea - Daphnia magna - <24 hours	48 hours
	-	Acute EC50 133 to 153 ppm Fresh water	Daphnia - Water flea - Daphnia magna - <24 hours	48 hours
	-	Acute LC50 >1100 ppm Fresh water	Fish - Rainbow trout,donaldson trout - Oncorhynchus mykiss	96 hours
	-	Acute LC50 >1021 ppm Fresh water	Fish - Bluegill - Lepomis macrochirus	96 hours
	-	Acute LC50 >800 ppm Fresh water	Fish - Rainbow trout,donaldson trout - Oncorhynchus mykiss	96 hours
	-	Acute LC50 92.83 to 148 mg/L Marine water	Crustaceans - Opossum shrimp - Americamysis bahia - Juvenile (Fledgling, Hatchling, Weanling) - <24 hours	48 hours
	-	Acute LC50 89.07 to 100.7 mg/L Marine water	Crustaceans - Opossum shrimp - Americamysis bahia - Juvenile (Fledgling, Hatchling, Weanling) - <24 hours	48 hours
	-	Acute LC50 5600 ppm Fresh water	Fish - Western mosquitofish - Gambusia affinis - Adult	96 hours
	-	Acute LC50 50 to 100 ppm Fresh water	Fish - Rainbow trout,donaldson trout - Oncorhynchus mykiss	96 hours

12 . Ecological information

	-	Acute LC50 233000 to 293000 ug/L Fresh water	Fish - Razorback sucker - Xyrauchen texanus - Swim-up - 10 to 17 days	96 hours
	-	Acute LC50 125000 to 162000 ug/L Fresh water	Fish - Flannelmouth sucker - Catostomus latipinnis - LARVAE - 12 to 13 days	96 hours
	-	Acute LC50 >100000 ug/L Fresh water	Fish - Colorado squawfish - Ptychocheilus lucius - Juvenile (Fledgling, Hatchling, Weanling) - 99 to 115 days - 0.4 to 1.1 g	96 hours
sodium hydrogencarbonate	-	Acute LC50 9000000 ug/L Fresh water	Fish - Bluegill - Lepomis macrochirus - 14.24 cm - 54.26 g	96 hours
	-	Acute LC50 8600000 ug/L Fresh water	Fish - Bluegill - Lepomis macrochirus	96 hours
	-	Acute LC50 8250000 ug/L Fresh water	Fish - Bluegill - Lepomis macrochirus - 3.88 cm - 0.96 g	96 hours
	-	Acute LC50 7550000 ug/L Fresh water	Fish - Western mosquitofish - Gambusia affinis - Adult	96 hours

Biodegradability

Not available.

13 . Disposal considerations

Waste disposal : 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 a safe way. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

Not available.

Disposal should be in accordance with applicable regional, national and local laws and regulations.

Refer to Section 7: HANDLING AND STORAGE and Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION for additional handling information and protection of employees.

14 . Transport information

Regulatory information	UN number	Proper shipping name	Classes	PG*	Label	Additional information
DOT Classification	Not available.	Not available.	Not available.	-		-
TDG Classification	Not available.	Not available.	Not available.	-		-
Mexico Classification	Not available.	Not available.	Not available.	-		-
ADR/RID Class	Not available.	Not available.	Not available.	-		-
IMDG Class	Not available.	Not available.	Not available.	-		-
IATA-DGR Class	UN3261	Corrosive Solid, Acidic, Organic, n.o.s.	8	III		-

PG* : Packing group

15 . Regulatory information

United States

HCS Classification : Target organ effects

U.S. Federal regulations : **United States inventory (TSCA 8b):** Not determined.

SARA 302/304/311/312 extremely hazardous substances: No products were found.
SARA 302/304 emergency planning and notification: No products were found.
SARA 302/304/311/312 hazardous chemicals: boric acid; sodium hydrogencarbonate
SARA 311/312 MSDS distribution - chemical inventory - hazard identification: boric acid: Immediate (acute) health hazard, Delayed (chronic) health hazard; sodium hydrogencarbonate: Immediate (acute) health hazard

Clean Water Act (CWA) 307: No products were found.

Clean Water Act (CWA) 311: No products were found.

Clean Air Act (CAA) 112 accidental release prevention: No products were found.

Clean Air Act (CAA) 112 regulated flammable substances: No products were found.

Clean Air Act (CAA) 112 regulated toxic substances: No products were found.

State regulations : **Connecticut Carcinogen Reporting:** None of the components are listed.
Connecticut Hazardous Material Survey: None of the components are listed.
Florida substances: None of the components are listed.
Illinois Chemical Safety Act: None of the components are listed.
Illinois Toxic Substances Disclosure to Employee Act: None of the components are listed.
Louisiana Reporting: None of the components are listed.
Louisiana Spill: None of the components are listed.
Massachusetts Spill: None of the components are listed.
Massachusetts Substances: None of the components are listed.
Michigan Critical Material: None of the components are listed.
Minnesota Hazardous Substances: None of the components are listed.
New Jersey Hazardous Substances: None of the components are listed.
New Jersey Spill: None of the components are listed.
New Jersey Toxic Catastrophe Prevention Act: None of the components are listed.
New York Acutely Hazardous Substances: None of the components are listed.
New York Toxic Chemical Release Reporting: None of the components are listed.
Pennsylvania RTK Hazardous Substances: None of the components are listed.
Rhode Island Hazardous Substances: None of the components are listed.

United States inventory (TSCA 8b) : Not determined.

15 . Regulatory information

Canada

WHMIS (Canada) : Class D-2A: Material causing other toxic effects (Very toxic).

Canadian lists : **CEPA Toxic substances:** None of the components are listed.
Canadian ARET: None of the components are listed.
Canadian NPRI: None of the components are listed.
Alberta Designated Substances: None of the components are listed.
Ontario Designated Substances: None of the components are listed.
Quebec Designated Substances: None of the components are listed.

Canada inventory : Not determined.

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.

16 . Other information

EU regulations

Hazard symbol or symbols :

Corrosive

Risk phrases : R34- Causes burns.

Safety phrases : S24/25- Avoid contact with skin and eyes.
S28- After contact with skin, wash immediately with plenty of water.

International regulations

International lists : **Australia inventory (AICS):** Not determined.
China inventory (IECSC): Not determined.
Japan inventory (ENCS): Not determined.
Japan inventory (ISHL): Not determined.
Korea inventory (KECI): Not determined.
New Zealand Inventory of Chemicals (NZIoC): Not determined.
Philippines inventory (PICCS): Not determined.

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Notice to reader

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