

Safety Data Sheet



Revision Date: 8/21/2014

SDS # SDS-10212-01

TMB BlueSTOP™ Solution

1. PRODUCT AND COMPANY IDENTIFICATION

Product Description:	Product Code
TMB BlueSTOP™ Solution	50-85-41
TMB BlueSTOP™ Solution	50-85-31
TMB BlueSTOP™ Solution	50-85-30
TMB BlueSTOP™ Solution	50-85-51

Hazardous Reagent
TMB BlueSTOP™ Solution

Hazardous Reagent Product code
Catalog No. Listed Above

Recommended Use Reagent

Contact Manufacturer KPL, Inc.
910 Clopper Road
Gaithersburg, Maryland 20878
USA

Phone #: 1-301-948-7755
Fax #: 1-301-948-0169
Web: www.kpl.com
Email: kplmsds@seracare.com

Emergency Telephone Numbers:

AUSTRALIA – POISONS INFORMATION CENTER	Telephone: 13 11 26	Hours: 24 hours
CANADIAN TRANSPORT EMERGENCY CENTER	Telephone: (1) 613 996 6666	Hours: 24 hours/day, 7 days/week
UK – THE NATIONAL FOCUS	Telephone: (44) 029 2041 6388	Hours: 09:00-17:00 GMT
USA- NATIONAL RESPONSE CENTER	Telephone: (1) 800 424 8802	Hours: 24 hours/day, 7 days/week

CHEMTREC: CHEMTREC Customer Number:- CCN12505*
For Chemical Emergency Spill, Leak, Fire, Exposure, or Accident
Call CHEMTREC Day or Night
Within USA and Canada: 1-800-424-9300 CCN12505 or
+1 703-527-3887 (collect calls accepted)

2. HAZARD IDENTIFICATION

Hazard Type Health Hazard

GHS Classification in accordance with 29 CFR 1910 (OSHA HCS)

Classification Acute toxicity, Category 3, oral; H301
Skin irritation, Category 2; H315
Eye irritation, Category 2; H319

Hazard Statement H301: Toxic if swallowed.
H315: Causes skin irritation.
H319: Causes serious eye irritation.
Supplemental Hazard Statement - EUH-phrases:
EUH032: Contact with acids liberates very toxic gas.

Precautionary Statement P264: Wash skin thoroughly after handling.
P270: Do not eat, drink or smoke when using this product.
P301 + P310: IF SWALLOWED: Immediately call a POISON CENTER or
doctor/physician.
P330: Rinse mouth.

P332 + P313: If skin irritation occurs:

Symbols of Danger

GHS06 Dgr: Danger



Data for 100% Hazardous Chemical

ROUTES OF EXPOSURE: The substance can be absorbed into the body by inhalation of its aerosol and by ingestion.

INHALATION RISK: Evaporation at 20°C is negligible; a harmful concentration of airborne particles can, however, be reached quickly on spraying or when dispersed, especially if powdered.

SHORT-TERM EXPOSURE: The substance is irritating to the eyes, skin and respiratory tract. Ingestion could cause hypocalcaemia and hypokalaemia. This may result in central nervous system disorders and cardiac disorders.

LONG-TERM EXPOSURE: The substance may have effects on the bones and teeth. This may result in fluorosis.

The product is a Mixture. It May Cause the following symptoms.

Redness. Pain.

SKIN: Redness.

INHALATION: Cough. Sore throat.

INGESTION: Abdominal pain. Burning sensation. Convulsions. Drowsiness. Cough. Diarrhoea. Sore throat. Vomiting. Unconsciousness.

3. COMPOSITION/INFORMATION ON INGREDIENTS

<u>Component</u>	<u>CHEMICAL</u>	<u>% Weight</u>	<u>CAS #:</u>
TMB BlueSTOP™ Solution	Sodium Fluoride	<0.6%	7681-49-4

Classification

Acute toxicity, Category 3, oral; H301
 Skin irritation, Category 2; H315
 Eye irritation, Category 2; H319

4. FIRST AID MEASURES

Data for 100% Hazardous Chemical

Ingestion First Aid: Rinse mouth. Induce vomiting (ONLY IN CONSCIOUS PERSONS!). Give one or two glasses of water to drink. Refer for medical attention .

Inhalation First Aid: Fresh air, rest. Half-upright position. Refer for medical attention.

Skin First Aid: Remove contaminated clothes. Rinse skin with plenty of water or shower. Refer for medical attention .

Eye First Aid: First rinse with plenty of water for several minutes (remove contact lenses if easily possible), then refer for medical attention.

5. FIRE FIGHTING MEASURES

Data For 100% Hazardous Chemical

Fire Acute Hazard: Not combustible. Gives off irritating or toxic fumes (or gases) in a fire.	Fire Prevention: NO open flames. NO contact with hot surfaces.	Fire Fighting: In case of fire in the surroundings, use appropriate extinguishing media.
Explosion Acute Hazard: Not Available	Not Available	In case of fire: keep drums, etc., cool by spraying with water.
CHEMICAL DANGERS:	Decomposes on contact with hot surfaces or flames. This produces toxic and corrosive fumes. Reacts with acids. This produces toxic and corrosive fumes.	
PHYSICAL DANGERS:	Not Available	

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions

Body protection:

Depending on the risk, wear a tight, long apron and boots or suitable chemical protection clothing.

Respiratory protection:

In an emergency (e.g.: unintentional release of the substance, exceeding the occupational exposure limit value) respiratory protection must be worn. Consider the maximum period for wear.

Respiratory protection: Particle filter P2 or P3, recommended P3, colour code white. Use insulating device for concentrations above the usage limits for filter devices, for oxygen concentrations below 17% volume, or in circumstances which are unclear.

Eye protection:

Sufficient eye protection must be worn.
Wear glasses with side protection.

Hand protection:

Use protective gloves. The glove material must be sufficiently impermeable and resistant to the substance. Check the tightness before wear. Gloves should be well cleaned before being removed, then stored in a well ventilated location. Pay attention to skin care.

Skin protection cremes do not protect sufficiently against the substance.

The following information is valid for aqueous, saturated solutions of the salt.

The following materials are suitable for protective gloves (Permeation time \geq 8 hours):
Natural rubber/Natural latex - NR (0,5 mm) (use non-powdered and allergen free products)

Polychloroprene - CR (0,5 mm)

Nitrile rubber/Nitrile latex - NBR (0,35 mm)

Butyl rubber - Butyl (0,5 mm)

Fluoro carbon rubber - FKM (0,4 mm)

Polyvinyl chloride - PVC (0,5 mm)

The times listed are suggested by measurements taken at 22 °C and constant contact. Temperatures raised by warmed substances, body heat, etc. and a weakening of the effective layer thickness caused by expansion can lead to a significantly shorter breakthrough time. In case of doubt contact the gloves' manufacturer. A 1.5-times increase / decrease in the layer thickness doubles / halves the breakthrough time. This data only applies to the pure substance. Transferred to mixtures of substances, these figures should only be taken as an aid to orientation.

Environmental Precautions

Low hazard to waters. Inform the responsible authorities when very large quantities get into water, drainage, sewer, or the ground.

Method of Containment

Collect leaking and spilled liquid in sealable containers as far as possible. Absorb remaining liquid in sand or inert absorbent and remove to safe place.

Methods of Clean-up

Clean-up with copious amounts of water.

Other Information

Not Available

Data for 100% Hazardous Chemical

**SPILLAGE
DISPOSAL**

Sweep spilled substance into covered containers. Carefully collect remainder. Then store and dispose of according to local regulations. Personal protection: particulate filter respirator adapted to the airborne concentration of the substance.

7. HANDLING AND STORAGE

Handling: Wear appropriate PPE. See section 8

Storage: Do not use any food containers - risk of mistake.
Containers have to be labelled clearly and permanently.
Store in the original container as much as possible.
Place fragile vessels in break-proof outer vessels.
Keep container tightly closed.
Store in a cool place.
Store in a dry place.
Keep container in a well-ventilated place.

Data for 100% Hazardous Chemical

STORAGE

Separated from acids and food and feedstuffs.

8. EXPOSURE CONTROL

Data for 100% Hazardous Chemical

INHALATION Use ventilation (not if powder), local exhaust or breathing protection.

EYES Wear face shield or eye protection in combination with breathing protection if powder.

SKIN Protective gloves.

INGESTION Do not eat, drink, or smoke during work. Wash hands before eating.

Engineering Controls Ensure adequate ventilation, especially in confined areas

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance Clear Solution

Physical State Liquid **pH:** 2.5 - 4.3

Data for 100% Hazardous Chemical

Boiling point: 1700°C
Melting point: 993°C
Density: 2.8 g/cm³
Solubility in water,
g/100ml at 20°C: 4.0

10. STABILITY AND REACTIVITY

Chemical Stability Stable under normal conditions.

Incompatibility Materials to Avoid Data for 100% Disodium Tetraborate Decahydrate: Explosive substances, Strongly oxidizing substances, Ammonium nitrate and preparations containing ammonium nitrate, Organic peroxides and self reactive substances.

Hazardous Decomposition Products Not Available

Hazardous Polymerization Will not occur

Data for 100% Hazardous Chemical

CHEMICAL DANGERS: Decomposes on contact with hot surfaces or flames. This produces toxic and corrosive fumes. Reacts with acids. This produces toxic and corrosive fumes.

PHYSICAL DANGERS: Not Available

11. TOXICOLOGY MEASURES

Acute Toxicity

The toxicological risks are minor due to the low concentration of hazardous ingredients. The following toxicological information is for the hazardous ingredient in pure form.

LD50 Oral Data for 100% Sodium Fluoride: LD50 oral rat
Value: 52 mg/kg
Reference: National Technical Information Service. Vol. UR-3490-95,

LD50 Dermal Not Available

LC50 Inhalation Not Available

Chronic Toxicity

Carcinogenicity Not Available

Irritation Data for 100% Sodium Fluoride:
H315: Causes skin irritation.
H319: Causes serious eye irritation.

Corrosivity Not Applicable

Sensitization Not Applicable

Neurological Effects Not Applicable

Mutagenic Effects Not Applicable

Reproductive Effects Not Applicable

Developmental Effects Not Applicable

Target Organ Effects Respiratory Tract, Gastrointestinal Tract

Other adverse effects Not Available

12. ECOLOGICAL MEASURES

Ecotoxicity Data for 100% Sodium Fluoride: LC50 Fish (96 hours)

Minimum: 51 mg/l
Maximum: 830 mg/l
Median: 300 mg/l

Study number: 13

Reference for median:

Saxena, R., R. Gupta, M. Tripathi, and K. Gopal 2001. Fluoride Induced Haematological Alterations in the Freshwater Fish Channa punctatus. J.Ecophysiol.Occup.Health 1(1/2):139-146

LC50 Crustaceans (48 hours)

Minimum: 340 mg/l
Maximum: 340 mg/l
Median: 340 mg/l

Study number: 1

Reference for median:

LeBlanc, G.A. 1980. Acute Toxicity of Priority Pollutants to Water Flea (Daphnia magna). Bull.Environ.Contam.Toxicol. 24(5):684-691 (OECDG Data File)

Persistence/Degradability	Not Available
Mobility in Environmental Media	Not Available
Bioaccumulation/Accumulation	Not Available

13. DISPOSAL MEASURES

Waste Disposal Method:	Observe all Federal, State and Local laws concerning health and pollution. Data for 100% Sodium Fluoride: Collection of small amounts of substance: Inorganic fluoride solutions must be handled with great care. Avoid any contact and only work with it in a powerful hood with a closed front panel. Residuals dissolved in water can precipitate as calcium fluoride. Place precipitate in collecting container for inorganic solids. Place filtrates in collecting containers for salt solutions (pH 6-8) or in collecting containers for toxic inorganic residuals and heavy-metal salts and their solutions. Collection vessels must be clearly labelled with a systematic description of their contents. Store the vessels in a well-ventilated location. Entrust them to the appropriate authorities for disposal.
Contaminated Packaging:	Avoid contact with skin and clothing. Place contaminated packaging in a break proof outer vessel and dispose on in compliance with national and local regulations.
US EPA Waste Number:	Not Available

14. TRANSPORTATION MEASURES

DOT:	Data for 100% Sodium Fluoride: UN Number: 1690 Shipping name: Sodium fluoride, solid Hazard Identification Number: 60 Class: 6.1 (Toxic Substances) Packing Group: III (low danger) Danger Label: 6.1 Tunnel restrictions: Passage forbidden through tunnels of category E. Data for Sodium Fluoride Solutions: UN Number: 3415 Shipping name: Sodium fluoride solution Hazard Identification Number: 60 Class: 6.1 (Toxic Substances) Packing Group: III (low danger) Danger Label: 6.1 Tunnel restrictions: Passage forbidden through tunnels of category E.
IATA:	Not Available
ADR (road)/ RID (rail):	Not Available
IMDG (sea):	Not Available
General Transport Regulations	Not Available

15. REGULATORY MEASURES

This product is a mixture that may contain one or more hazardous chemicals. The hazardous ingredients listed are only those as required by 29 CFR 1910.1200 q 2.C1.

SARA 313

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product contains no chemical or chemicals which are subject to the reporting requirements of the Act and and Title 40n of the Code of

Federal Regulations, Part 372.

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

This product contains no chemical or chemicals which are subject to the reporting requirements of the Clean Air Act.

State Regulations**California Proposition 65:**

This product contains the following Proposition 65 chemicals: None Listed

State Right to Know Act

Chemical Name	Sodium Fluoride
Massachusetts	Listed
New Jersey	Listed
Pennsylvania	Listed
New York	Listed
Rhode Island	Listed

International Inventories

Chemical Name	Sodium Fluoride
TSCA	Listed
DSL	Listed
NDSL	Not Listed
EINECS	Listed
CHINA	Listed
KECL	Listed
JAPAN:	Listed
AICS	Listed

EU Regulations

Annex I Index#	Annex I Index# : 009-004-00-7 Substance Name in Annex 1 : sodium fluoride
Classification	Acute toxicity, Category 3, oral; H301 Skin irritation, Category 2; H315 Eye irritation, Category 2; H319
Risk Phrases	H301: Toxic if swallowed. H315: Causes skin irritation. H319: Causes serious eye irritation. Supplemental Hazard Statement - EUH-phrases: EUH032: Contact with acids liberates very toxic gas.
Safety Phrases	P264: Wash skin thoroughly after handling. P270: Do not eat, drink or smoke when using this product. P301 + P310: IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician. P330: Rinse mouth. P332 + P313: If skin irritation occurs:
Symbols and Indications of Danger	GHS06 Dgr: Danger
Specific Concentration Limits	Not Available
Export and Import	This substance is not listed in the Annex I of Regulation (EC) No 649/2012.
European Priority List	This substance is not listed in a priority list (as foreseen under Council Regulation (EEC) No 793/93 on the evaluation and control of the risks of existing substances.).

16. OTHER INFORMATION

The above information is believed to be correct, but does not purport to be all inclusive and shall be used only as a guide. KPL shall not be held liable for any damage resulting from handling or from contact with the above product. Users should make their own investigations to determine the suitability of the information for their particular purposes. This material is sold for research purposes and is intended as laboratory reagents only. It is not intended for food, drug, household, agricultural or cosmetic use. Its use must be supervised by a technically qualified individual experienced in handling potentially hazardous chemicals.

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