BioFX® 450 nm Stop Reagent for TMB Microwell Substrates

Safety Data Sheet

Revision date: 03-Nov-2014 Supersedes: 17-Aug-2011 Version: 3

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

1.1. Product identifier

Product name : BioFX® 450 nm Stop Reagent for TMB Microwell Substrates

Product form : Mixture

Product code : STPR

1.2. Relevant identified uses of the substance or mixture and uses advised against

Use of the substance/mixture : For laboratory use

1.3. Details of the supplier of the safety data sheet

SurModics, Inc.
9924 West 74th Street
Eden Prairie, MN 55344 USA
Phone: (952) 500-7000
Fax: (952) 500-7001

1.4. Emergency telephone number

Emergency number : CHEMTREC: 1-800-424-9300 (US and Canada) / 1-703-527-3887 (International shipments)

SECTION 2: Hazards identification

GHS-US classification

Acute Tox. 4 (Oral)	H302
Skin Corr. 1B	H314
Eye Irrit. 2A	H319
Skin Sens. 1	H317
STOT SE 3	H335

2.2. Label elements

GHS-US labelling

Hazard pictograms (GHS-US) :

GHS05 GHS07

Signal word (GHS-US) : **Danger**

Hazard statements (GHS-US) :
H302 - Harmful if swallowed
H314 - Causes severe skin burns and eye damage
H317 - May cause an allergic skin reaction
H319 - Causes serious eye irritation
H335 - May cause respiratory irritation

Precautionary statements (GHS-US) :
P260 - Do not breathe dust/fume/gas/mist/vapours/spray
P261 - Avoid breathing fume, mist, vapours, spray
P264 - Wash hands, forearms and face thoroughly after handling
P270 - Do not eat, drink or smoke when using this product
P271 - Use only outdoors or in a well-ventilated area
P272 - Contaminated work clothing must not be allowed out of the workplace
P280 - Wear eye protection, face protection, protective clothing, protective gloves
P301+P312 - If swallowed: Call a doctor, a POISON CENTER if you feel unwell
P301+P330+P331 - If swallowed: rinse mouth. Do NOT induce vomiting
P302+P352 - If on skin: Wash with plenty of water
P303+P361+P353 - IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower
P304+P340 - IF INHALED: Remove person to fresh air and keep comfortable for breathing
P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
P310 - Immediately call poison center/doctor
P312 - Call a doctor, a POISON CENTER if you feel unwell
P321 - Specific treatment (see Wash hands and other exposed areas with mild soap and water before

eating, drinking or smoking and when leaving work on this label)
P330 - Rinse mouth
P333+P313 - If skin irritation or rash occurs: Get medical advice/attention
P337+P313 - If eye irritation persists: Get medical advice/attention
P362+P364 - Take off contaminated clothing and wash it before reuse
P363 - Wash contaminated clothing before reuse
P403+P233 - Store in a well-ventilated place. Keep container tightly closed
P405 - Store locked up
P501 - Dispose of contents/container to licensed waste handling facility

2.3. Other hazards

No additional information available

2.4. Unknown acute toxicity (GHS-US)

No data available

SECTION 3: Composition/information on ingredients

3.1. Substance

Name	Product identifier	%
Maleic acid	(CAS No) 110-16-7	60 - 100

3.2. Mixture

Not applicable

SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures general : Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice (show the label where possible).

First-aid measures after inhalation : IF INHALED: Remove to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if breathing is affected. If breathing is difficult, supply oxygen.

First-aid measures after skin contact : IN ON SKIN (or clothing): Remove affected clothing and wash all exposed skin with water for at least 15 minutes. Get medical attention immediately.

First-aid measures after eye contact : IF IN EYES: Immediately flush with plenty of water for at least 15 minutes. Remove contact lenses if present and easy to do so. Get medical attention immediately. Continue rinsing.

First-aid measures after ingestion : IF SWALLOWED: rinse mouth thoroughly. Do not induce vomiting without advice from poison control center or medical professional. Get medical attention if you feel unwell.

4.2. Most important symptoms and effects, both acute and delayed

Symptoms/injuries : May cause an allergic skin reaction. Harmful if swallowed. Causes serious eye damage. May cause respiratory irritation. Harmful in contact with skin.

Symptoms/injuries after inhalation : May cause respiratory irritation.

Symptoms/injuries after skin contact : Harmful in contact with skin. May cause an allergic skin reaction.

Symptoms/injuries after eye contact : Causes serious eye damage.

Symptoms/injuries after ingestion : Harmful if swallowed.

Chronic symptoms : Skin sensitization.

4.3. Indication of any immediate medical attention and special treatment needed

No additional information available.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media : Foam. Carbon dioxide. Dry powder. Water spray. Sand.

Unsuitable extinguishing media : None known.

5.2. Special hazards arising from the substance or mixture

Fire hazard : The product is not flammable.

Explosion hazard : Product is not explosive.

Reactivity : No dangerous reactions known under normal conditions of use.

5.3. Advice for firefighters

Precautionary measures fire : Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

Firefighting instructions : Use water spray or fog for cooling exposed containers. Exercise caution when fighting any chemical fire. Do not dispose of fire-fighting water in the environment.

Protection during firefighting : Do not enter fire area without proper protective equipment, including respiratory protection.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General measures : Evacuate area. Ventilate area. Keep upwind. Spill should be handled by trained clean-up crews properly equipped with respiratory equipment and full chemical protective gear (see Section 8).

6.1.1. For non-emergency personnel

Protective equipment : Wear Protective equipment as described in Section 8.

Emergency procedures : Evacuate unnecessary personnel.

6.1.2. For emergency responders

Protective equipment : Wear suitable protective clothing, gloves and eye or face protection. Approved supplied-air respirator, in case of emergency.

6.2. Environmental precautions

Prevent entry to sewers and public waters. Notify authorities if liquid enters sewers or public waters. Avoid release to the environment.

6.3. Methods and material for containment and cleaning up

For containment : Scoop solid spill into closing containers or bags. Avoid dust formation.

Methods for cleaning up : Sweep up dry powder and dispose properly. Sweep or shovel spills into appropriate container for disposal. This material and its container must be disposed of in a safe way, and as per local legislation.

6.4. Reference to other sections

See Sections 8 and 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling : Do not handle until all safety precautions have been read and understood. Use appropriate personal protection equipment (PPE). Provide appropriate exhaust ventilation at places of dust forming. Keep away from sources of ignition - No smoking. Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work.

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions : Keep the container tightly closed. Store in a dry, cool and well-ventilated place. Avoid elevated temperatures.

Storage temperature : Room temperature

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

No data available.

8.2. Exposure controls

Appropriate engineering controls : Ensure adequate ventilation, especially in confined areas.

Personal protective equipment : Gloves. Wear labcoat with full coverage clothing. Wear chemical goggles and face shield in combination.

Hand protection : Use gloves chemically resistant to this material when prolonged or repeated contact could occur. Gloves should be classified under Standard EN 374 or ASTM F1296. Suggested glove materials are: Neoprene, Nitrile/butadiene rubber, Polyethylene, Ethyl vinyl alcohol laminate, PVC or vinyl.

Eye protection : Eye protection, including both chemical splash goggles and face shield, must be worn when possibility exists for eye contact due to spraying liquid or airborne particles.

Skin and body protection : Lab coat. Wear suitable protective clothing. Wear long sleeves.

Respiratory protection : Where excessive vapour, mist, or dust may result, use NIOSH approved respiratory protection equipment.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	:	Solid
Appearance	:	Powder.
Color	:	White.
Odor	:	none to slight.
Odor Threshold	:	No data available
pH	:	<= 2
Relative evaporation rate (butylacetate=1)	:	No data available
Melting point	:	137 - 140 °C (279 - 284 °F) - lit.
Freezing point	:	No data available
Boiling point	:	160 °C (320 °F)
Flash point	:	127 °C (261 °F) - closed cup
Auto-ignition temperature	:	No data available
Decomposition temperature	:	No data available
Flammability (solid, gas)	:	Not Flammable
Vapour pressure	:	No data available
Relative vapour density at 20 °C	:	No data available
Relative density	:	No data available
Density	:	1.59 g/cm³ at 25 °C (77 °F)
Solubility	:	Soluble in water. Water: 788 g/l at 20 °C (68 °F)
Log Pow	:	-0.48
Log Kow	:	No data available
Viscosity, kinematic	:	No data available
Viscosity, dynamic	:	No data available
Explosive properties	:	Product is not explosive.
Oxidising properties	:	Not an Oxidizer.
Explosive limits	:	2.7 vol %

9.2. Other information

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

No dangerous reactions known under normal conditions of use.

10.2. Chemical stability

Stable under recommended handling and storage conditions (see section 7).

10.3. Possibility of hazardous reactions

None known.

10.4. Conditions to avoid

Elevated temperatures. Moisture.

10.5. Incompatible materials

Strong oxidizing agents. Reducing agents. Strong bases.

10.6. Hazardous decomposition products

Thermal decomposition generates : Carbon oxides (CO, CO2).

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity : Oral: Harmful if swallowed.

Maleic acid (110-16-7)	
LD50 oral rat	708 mg/kg (Source: IUCLID)

Maleic acid (110-16-7)	
LD50 dermal rabbit	1560 mg/kg (Source: NLM_CIP)
LC50 inhalation rat (mg/l)	> 720 mg/m³ 1 h; (Source: NLM_CIP)

Skin corrosion/irritation : Causes severe skin burns and eye damage.
pH: <= 2

Serious eye damage/irritation : Causes serious eye irritation.
pH: <= 2

Respiratory or skin sensitisation : May cause an allergic skin reaction.

Germ cell mutagenicity : Not classified

Carcinogenicity : Not classified

Reproductive toxicity : Not classified

Specific target organ toxicity (single exposure) : May cause respiratory irritation.

Specific target organ toxicity (repeated exposure) : Not classified

Aspiration hazard : Not classified

Symptoms/injuries after inhalation : May cause respiratory irritation.

Symptoms/injuries after skin contact : Harmful in contact with skin. May cause an allergic skin reaction.

Symptoms/injuries after eye contact : Causes serious eye damage.

Symptoms/injuries after ingestion : Harmful if swallowed.

Chronic symptoms : Skin sensitization.

SECTION 12: Ecological information

12.1. Toxicity

Ecology - general : No information available.

12.2. Persistence and degradability

No information available.

12.3. Bioaccumulative potential

No information available.

12.4. Mobility in soil

No information available.

12.5. Other adverse effects

No data available.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Waste treatment methods : Obtain the consent of pollution control authorities before discharging to wastewater treatment plants.

Waste disposal recommendations : Dispose in a safe manner in accordance with local/national regulations. Do not allow the product to be released into the environment.

SECTION 14: Transport information

In accordance with DOT

Transport document description : UN3261 Corrosive solid, acidic, organic, n.o.s. (Maleic Acid), 8, II

UN-No.(DOT) : 3261

DOT NA no. : UN3261

Proper Shipping Name (DOT) : Corrosive solid, acidic, organic, n.o.s.
(Maleic Acid)

Department of Transportation (DOT) Hazard Classes : 8 - Class 8 - Corrosive material 49 CFR 173.136

Hazard labels (DOT) : 8 - Corrosive

Packing group (DOT) : II - Medium Danger

DOT Quantity Limitations Passenger aircraft/rail (49 CFR 173.27)	:	15 kg
DOT Quantity Limitations Cargo aircraft only (49 CFR 175.75)	:	50 kg
DOT Vessel Stowage Location	:	B - (i) The material may be stowed ''on deck'' or ''under deck'' on a cargo vessel and on a passenger vessel carrying a number of passengers limited to not more than the larger of 25 passengers, or one passenger per each 3 m of overall vessel length; and (ii) ''On deck only'' on passenger vessels in which the number of passengers specified in paragraph (k)(2)(i) of this section is exceeded.

Additional information

Other information : No supplementary information available.

Transport by sea

No additional information available

Air transport

No additional information available

SECTION 15: Regulatory information

15.1. US Federal regulations

BioFX® 450 nm Stop Reagent for TMB Microwell Substrates	
All chemical substances in this product are listed in the EPA (Environment Protection Agency) TSCA (Toxic Substances Control Act) Inventory All the constituents of this preparation are registered in the EINECS inventory or in the ELINCS list	
SARA Section 311/312 Hazard Classes	Delayed (chronic) health hazard Immediate (acute) health hazard

Maleic acid (110-16-7)	
Listed on the United States TSCA (Toxic Substances Control Act) inventory Listed on United States SARA Section 313	
RQ (Reportable quantity, section 304 of EPA's List of Lists) :	5000 lb Final

15.2. International regulations

CANADA

No additional information available

15.3. US State regulations

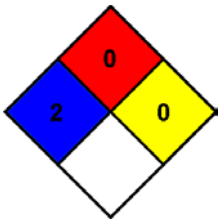
California Proposition 65

This product does not contain any substances known to the state of California to cause cancer and/or reproductive harm

Maleic acid (110-16-7)
U.S. - Massachusetts - Right To Know List U.S. - New Jersey - Right to Know Hazardous Substance List U.S. - Pennsylvania - RTK (Right to Know) - Environmental Hazard List

SECTION 16: Other information

Indication of changes	:	Revision 3: New SDS Created.
Revision date	:	03-Nov-2014
Other information	:	Author: BCS.
NFPA health hazard	:	2 - Intense or continued exposure could cause temporary incapacitation or possible residual injury unless prompt medical attention is given.
NFPA fire hazard	:	0 - Materials that will not burn.
NFPA reactivity	:	0 - Normally stable, even under fire exposure conditions, and are not reactive with water.



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