

Safety Data Sheet

IDENTIFICATION

PRODUCT NAME : PolySWAB

COMPANY : Foamtec International Co., Ltd.

Branch 3 : 111/1 Moo 2, Phahonyothin RD. KM. 56 Tambol Lamsai
Amphur Wangnoi, Pranakornsriyutthaya 13170
Tel +66 35 740 717 Fax +66 35 740 744

Branch 6 : 259/1 Moo 3 Laem Chabang Industrial Estates
Thungsukhla, Sriracha, Chonburi 20230
Tel.: +66 33 678 877 Fax.: +66 33 678 876

Material 1 : **High Flow Polypropylene Homopolymer**

1.1 HAZARD IDENTIFICATION

POTENTIAL HEALTH EFFECTS

EYES : Not applicable.

SKIN : Exposure to molten may cause thermal burns.

INHALATION : Not applicable.

SIGNS AND SYMPTOMS OF OVER EXPOSURE

EYES : Irritation or redness.

SKIN : Not applicable.

INHALATION : Irritation of the nose, throat and respiratory tract.

CHRONIC : None known

CARCINOGENICITY : None known

MUTAGENICITY : None known

REPRODUCTIVE TOXICITY

REPRODUCTIVE EFFECTS : None known

TERATOGENIC EFFECTS : None known

Doc.No. : WCC-SDS-028/00

Issued Date : 25-Apr-16

Effectived Date : 25-Apr-16

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1.2 COMPOSITION / INFORMATION ON IDENTIFICATION

<u>Chemical Name</u>	<u>Wt. %</u>	<u>CAS #</u>
Polypropylene Homopolymer	> 95	9003-07-0
Stabilizers (trade secrete)	< 5	

1.3 FIRST AID MEASURES

EYES	: Flush eyes with water for 15 minutes. Get medical attention.
SKIN	: Molten resin - If molten material comes in contact with the skin, cool under ice water or a running stream of water. DO NOT attempt to remove the material from the skin. Removal could result in severe damage. Get medical attention.
INGESTION	: Not applicable.
INHALATION	: Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.
ANTIDOTES	: Not applicable.
NOTES TO PHYSICIAN	: None.

1.4 FIRE - FIGHTING MEASURES

FLASHPOINT AND METHOD	: Not determined.
FLAMMABLE LIMITS AUTOIGNITION	: Not yet determined.
TEMPERATURE	: Not determined.
EXTINGUISHING MEDIA	: Use foam, carbon dioxide, or water spray when fighting fires involving this material.
HAZARDOUS COMBUSTION PRODUCTS	: Carbon dioxide, carbon monoxide, ketones, acrolein, aldehydes, unidentified organic compounds.
EXPLOSION HAZARDS	: Product as shipped is not a combustible dust. However, a combustible concentration of dust may occur when fines are suspended in air.

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- FIRE FIGHTING PROCEDURES** : Standard procedure for Class A fires.
- FIRE FIGHTING EQUIPMENT** : As in any fire, water self-contained pressure demand breathing apparatus, (MSHA/NIOSH approved or equivalent) and full protective gear.
- SENSITIVE TO STATIC DISCHARGE** : Static discharge could be an ignition source for a combustible concentration of dust.
- SENSITIVITY TO IMPACT** : Not applicable.

1.5 ACCIDENTAL RELEASE MEASURES

ENVIRONMENTAL PRECAUTIONS

- WATER SPILL** : Keep pellets out from waterways.
- LAND SPILL** : Not yet determined.
- AIR SPILL** : Not yet determined.
- GENERAL PROCEDURES** : Vacuum or sweep up material and place in a disposal container.

1.6 HANDLING AND STORAGE

- GENERAL PROCEDURES** : Keep away from heat, sparks and flame.
- HANDLING** : Ground and bond containers when transferring material.
- STORAGE** : This product may react with strong oxidizing agents and should not be stored near such materials. Store boxed and bags of material in areas protected with automatic sprinklers.
- STORAGE TEMPERATURE** : 60°C (140°F) maximum.
- SHELF LIFE** : Not yet determined.
- ELECTROSTATIC ACCUMULATION HAZARD** : Material may accumulate static charges during transfers. Ground and bond containers when transferring material.

1.7 EXPOSURE CONTROLS PERSONAL PROTECTION

NOT APPLICABLE

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Material 1 : High Flow Polypropylene Homopolymer

1.8 PHYSICAL AND CHEMICAL PROPERTIES

PHYSICAL STATE	: Solid
ODOR	: Slightly waxy odor
APPEARANCE	: Pellet
COLOR	: Translucent to white
FREEZING POINT	: Not applicable
MELTING POINT	: > 160°C (320°F)
DENSITY	: Not determined
SPECIFIC GRAVITY	: 0.88 TO 0.92
MOLECULAR WEIGHT	: Not determined
(VOC) NOTES	: Not yet determined
PHYSICAL STATE	: None
PERCENT VOLATILE	: < 0.4%
VAPOR PRESSURE	: Not applicable
BOILING POINT	: Not applicable
WATER SOLUBILITY	: Negligible
EVAPORATION RATE	: Not applicable

1.9 STABILITY AND REACTIVITY

NOT APPLICABLE

1.10 TOXICOLOGICAL INFORMATION

NOT APPLICABLE

1.11 ECOLOGICAL INFORMATION

NOT APPLICABLE

1.12 DISPOSAL CONSIDERATION

NOT APPLICABLE

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1.13 TRANSPORT INFORMATION

NOT APPLICABLE

1.14 REGULATORY INFORMATION

NOT APPLICABLE

1.15 OTHER INFORMATION

NOT APPLICABLE

UNCONTROLLED

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Material 2 : Irgastat Conductive Polymer

2.1 HAZARD IDENTIFICATION

NOT APPLICABLE

2.2 COMPOSITION / INFORMATION ON INGREDIENTS

CAS Number	Product Name	Content	Symbol(s)	R-Phraso(s)
007791-07-3	Sodium-perchlorate, monohydrate	< 5%	O - Xn	R09-R22

2.3 FIRST AID MEASURES

SKIN CONTACT	: Wash off with soap and plenty of water. Do not use organic solvents.
EYE CONTACT	: Rinse immediately with plenty of water for at least 15 minutes. In case of eye irritation, seek medical attention.
INHALATION	: Move to fresh air. In case of prolonged exposure, seek medical attention. In case of indisposition, seek medical attention. In case of irritation of respiratory system or mucous membranes, seek medical attention.
INGESTION	: Immediately give plenty (> 500 ml) of water (if possible charcoal slurry). In case of spontaneous vomiting be sure that vomitus can freely drain due of danger of suffocation. Give water repeatedly. Artificial induction of vomiting should be restricted to first aid staff. Give nothing by mouth in cases of unconsciousness or convulsion. Seek medical advice.

2.4 FIRE - FIGHTING MEASURES

SUITABLE EXTINGUISHING MEDIA	: Water spray, Carbon dioxide (CO ₂), Foam, Dry powder.
EXTINGUISHING MEDIA WHICH MUST NOT BE USED FOR SAFETY REASONS	: High volume water jet.
EXPOSURE HAZARDS	: Contaminated water from fire hoses or sprinklers, etc., must be prevented from draining into watercourses, sewers, or the ground water. Sufficient measures must be taken to retain water used for extinguishing. Contaminated water and soil must be disposed of in conformity with local regulations.

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SPECIAL PROTECTIVE EQUIPMENT FOR FIREFIGHTERS

: Wear full protective clothing. Wear self-contained breathing apparatus.

HAZARDOUS DECOMPOSITION PRODUCTS

: Oxides of carbon, Oxides of nitrogen (NOx), Oxides of phosphorus,
Toxic gases/vapours.

2.5 ACCIDENTAL RELEASE MEASURES

PERSONAL PRECAUTIONS

: Do not breathe vapours/dust. Remove all sources of ignition. Avoid contact with skin, eyes and clothing.

ENVIRONMENTAL PRECAUTIONS

: Do not flush into surface water, sanitary sewer or ground water system.

METHODS FOR CLEANING UP

: Use mechanical handling equipment. Collect the spilled product into suitable containers, which must be tightly sealed and properly labelled. Avoid dust formation.

2.6 HANDLING AND STORAGE

HANDLING

: Avoid dust formation and ignition sources. Ensure good local exhaust ventilation. Do not eat, drink or smoke at the workplace.

STORAGE

Keep away from food and drink. Store in the original container securely closed.

2.7 EXPOSURE CONTROLS PERSONAL PROTECTION

EXPOSURE LIMIT(S)

: Value not tested.

TECHNICAL MEASURES / PRECAUTIONS

: No special precautions required.

RESPIRATORY PROTECTION

: Effective dust mask.

HAND PROTECTION

: Protective gloves.

EYE PROTECTION

: Suitable goggles or face protection.

SKIN AND BODY PROTECTION

: Working clothes, Closed footwear.

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Material 2 : Irgastat Conductive Polymer

2.8 PHYSICAL AND CHEMICAL PROPERTIES

FORM : Pastilles.
COLOUR : White.
ODOUR : Odourless.
MELTING / FREEZING TEMPERATURE : 170 - 180° C

2.9 STABILITY AND REACTIVITY

DECOMPOSITION TEMPERATURE : Not tested.
CONDITIONS TO AVOID : Static discharges.
MATERIALS TO AVOID : Strong acids, strong bases and strong oxidising agents.
HAZARDOUS DECOMPOSITION PRODUCTS : Oxides of carbon, Oxides of nitrogen (NOx), Oxides of phosphorus, Toxic gases/vapours.
FURTHER INFORMATION : In contact with oxidisable material sodium perchlorate may explode when ignited.

2.10 TOXICOLOGICAL INFORMATION

ACUTE ORAL TOXICITY LD50 > 2000 mg/kg EEC 88/379
 Rat Conventional Method
ACUTE DERMAL Not irritant EEC 88/379
IRRITATION/CORROSION Conventional Method
 Rabbit
ACUTE EYE IRRITATION/CORROSION Not irritant EEC 88/379
 Rabbit Conventional Method
ACUTE SKIN SENSITISATION Not sensitising EEC 88/379
 Guinea pig Conventional Method

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2.11 ECOLOGICAL INFORMATION

NOT APPLICABLE

2.12 DISPOSAL CONSIDERATION

NOT APPLICABLE

2.13 TRANSPORT INFORMATION

NOT APPLICABLE

2.14 REGULATORY INFORMATION

NOT APPLICABLE

2.15 OTHER INFORMATION

NOT APPLICABLE

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Material 3 : Flexible Polyurethane foam

3.1 HAZARD IDENTIFICATION

ROUTES OF ENTRY : Inhalation - Foam dust

HEALTH HAZARDS : Coares dust can cause mechanical irritation of lungs and eyes.
Airbone dust is evaluated as a nuisance dust. If ignited foam may decompose and emit toxic gases and respiratory.

CARCINOGENICITY

NTP : None

IARC MONOGRAPHS : No

OSHA REGULATED : No

MEDICAL CONDITIONS

AGGRAVATED BY EXPOS : None Known

EMERGENCY FIRST AID PROCEDURES

INHALATION : Remove to fresh air, contact physician if respiratory discomfort persists.

2. COMPOSITION / INFORMATION ON IN : Flush eyes thoroughly with water for 15 minutes.

SKIN : None necessary

INGESTION : None necessary

3.2 COMPOSITION / INFORMATION ON IDENTIFICATION

NOT APPLICABLE : No established OSHA Permissible Exposure Limit or ACGIH threshold Limit Value.

Foamtec Polyurethane foam is a fully cross-linked reaCtion product of Polyhydroxy polyol, toluene di isocyanate, catalysts, surfactant, pigment and water. Polyurethane foam product is a polymeric material consisting of repeating units of carbon, hydrogen, oxygen and nitrogen.

3.3 FIRST AID MEASURES

NOT APPLICABLE

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Material 3 : Flexible Polyurethane foam

3.4 FIRE - FIGHTING MEASURES

FLASH POINT	: Decomposition products flash at 500 °F
FLAMMABLE LIMITS	: Not applicable
UEL	: Not applicable
LEL	: Not applicable
CLASSIFICATION	: Combustible Solid
NFPA SPRINKLER CLASSIFICATION	: Extra Hazard
EXTINGUISHER MEDIA	: Dry Chemical, Water, Carbon dioxide
SPECIAL FIRE FIGHTING PROCEDURES	: Wear self-contained breathing apparatus in enclosed areas.
UNUSUAL FIRE & EXPLOSION HAZARDS	: If ignited, foam can produce rapid flame spread, intense heat, dense black smoke. Accumulated polyurethane dust can be readily ignited and presents a fire risk. High concentrations of dust in the air can explode if exposed to a flame, spark or other ignition oxidizing sources.

3.5 ACCIDENTAL RELEASE MEASURES

NOT APPLICABLE

3.6 HANDLING AND STORAGE

STEP TO BE TAKEN IN CASE OF ACCIDENTAL RELEASE : No special response required ---sweep up.

MATERIALS IF RELEASED OR SPILLED WASTE DISPOSAL METHOD

: Federal, state and local authorities should be contacted before attempting any form of disposal.

SAFE HANDLING AND STORAGE : Warehousing of bun stock, sheets, rolls, and fabricated items should be stored under a fusible sprinkler system with a minimum of six feet clearance between stacks of foam and the sprinkler heads.

Do not store foam near any ignition sources such as exposed electrical or

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Material 3 : Flexible Polyurethane foam

gas heating elements, open flames and exposed lights. Donot smoke in foam storage areas. Do not allow foam scrap and cuttings to accumulate and maintain clear aisles with adequate access to all storage areas and exits.

OTHER PRECAUTIONS : Notify local fire companies of presence of large quantities of foam.

3.7 EXPOSURE CONTROLS AND PERSONAL PROTECTION

- VENTILATION** : Local exhaust ventilation is recommended for this processing procedures which may generate foam dust and decomposition products. Examples of these processes include sawing, grinding, buffing and flame lamination, hot wire cutting, heat sealing and hot stamping.
- RESPIRATORY PROTECTION** : Should be selected based on identity and concentration of air contaminant. Only NIOSH-approved respirators for protection against the air contaminant of concern should be used.
- EYE PROTECTION** : Recommended for those processing operations which may generate dust.

3.8 PHYSICAL AND CHEMICAL PROPERTIES

- BOILING POINT** : Not applicable
- MELTING POINT** : 350 - 375 °F
- VAPOR PRESSURE (mmHg)** : Not applicable
- VAPOR DENSITY** : Not applicable
- DENSITY** : 1.1 - 20 lbs/cfc
- EVAPORATION RATE** : Not applicable
- SOLUBILITY IN WATER** : Insoluble
- APPEARANCE AND ODOR** : Uniform cellular solid structure of varying colors with slight characteristic odor.

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3.9 STABILITY AND REACTIVITY

STABILITY CONDITIONS TO AVOID INCOMPATIBILITY HAZARDOUS DECOMPOSITION PRODUCT

: Stable

High temperature, open flames; strong oxidizers (i.e. hypochlorites)

Strong oxidizing acids - will degrade.

PRODUCTS : CO, acetaldehyde, acrylonitrile, polymer fragments, oxides of nitrogen and hydrogen cyanide.

HAZARDOUS POLYMERIZATION : Will not Occur.

3.10 TOXICOLOGICAL INFORMATION

potential for allergic reactions. Some foams (particularly those intended for toy use) have been tested for acute eye, skin and ingestion toxicity per 16CER 1500.3, 1500.40 and 1500.42 (animal toxicity) with no evidence of acute toxicity. Some foams have been tested for human skin irritation (sensitization) with no evidence for sensitizing potential. Foam is generally not recommended for contact with open wounds or for internal use where extractable may be absorbed into the body unless appropriate testing has been done.

3.11 ECOLOGICAL INFORMATION

CHEMICAL FATE INFORMATION : Biodegradation will occur slowly in the presence of light and air.

3.12 DISPOSAL CONSIDERATION

NOT APPLICABLE

3.13 TRANSPORT INFORMATION

SUGGESTED SHIPPING NAME : Flexible Polyurethane Foam (Not currently regulated by DOT).

HAZARD CLASS : Not applicable

HAZARD ID : Not applicable

UN/NA : Not applicable

Material 3 : Flexible Polyurethane foam

3.14 REGULATORY INFORMATION

FEDERAL REGULATIONS

TSCA : All components are listed. There is no listing for the finished polymer.

OSHA : Defined as article (29CER 1910.1200)

CERCLA : Not reportable.

SARA TITLE III

311/312 Hazard Cat: None

311/312 Hazard Cat: None

CLEAN AIR ACT : No ozone depleting emissions.

INTERNATIONAL REGULATION

CANADIAN WHIMS : Defined as manufactured article.

EUROPEAN (ECC) : None Known.

STATE REGULATION

CALIFORNIA : Although some ingredients used in the manufacture of foam require listing under Proposition 65, they are not present in sufficient quantity in the finished product to require listing, (Also consider implications of water spills and fire run off).

OTHER STATES : None Known.

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Material 3 : Flexible Polyurethane foam

3.15 OTHER INFORMATION

The ignition temperature of polyurethane foam will vary depending on the product chemical formulation, but all polyurethane foam are combustible and can create a fire risk. Flexible polyurethane foams, once ignited, may degrade and melt to a combustible liquid which may add to the fire involvement. not be regarded as denoting fire safety under all conditions. Small scale fire tests are to reflect hazards presented not intended by these or any other material under real fire conditions. who are exposed. This is true for all organic materials. Fire risks in varying degrees are common to all fires: heat, carbon monoxide, other toxicants, oxygen depletion and smoke. In fires involving polyurethane foam, particularly flexible foams, large quantities of dense smoke can be generated quickly. and potentially lethal gases. Standard fire-fighting equipment generally employed by authorized firemen is mandatory.

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Material 4 : Polyester (Single Knit S2)

4.1 HAZARD IDENTIFICATION

LD50 LC50 MIXTURE	: Not provided.
INHALATION	: NO.
SKIN	: NO.
INGESTION	: NO.
OSHA	: NO.
HEALTH HAZARDS ACUTE AND CHRONIC	: Product is in solid form and will not become airborne except under extreme conditions. Even then it shows no toxic reaction.
EXPLANATION OF CARCINOGENICITY	: IARC lists polyester as "No adequate evidence".
SIGNS AND SYMPTIONS OF OVEREXPOSURE	: None.
MEDICAL COND AGGRAVATED BY EXPOSURE	: Not provided.

4.2 COMPOSITION / INFORMATION ON IDENTIFICATION

Polyester

4.3 FIRST-AID MEASURES

Use normal first aid procedures.

4.4 FIRE-FIGHTING MEASURES

FLASH POINT (METHOD USED)	: Marked Class I "Did Not ignite" by test method ASTM D1230-1994
FLAMMABLE LIMITS	: Marked Class I "Did Not ignite" by test method ASTM D1230-1994
EXTINGUISHING MEDIA	: Self-extinguishing-water or other class a extinguish agent.
FIRE FIGHTING PROCEDURES	: Use niosh/MSHA approved SCBA in an enclosed area in fires.
UNUSUAL FIRE / EXPLOSION HAZARD	: None indicated by the MFR.

4.5 ACCIDENTAL RELEASE MEASURES

SPILL RELEASE PROCEDURES	: Use proper personal protection; use normal procedures and collect for proper disposal. Nylon fibers and polyester fibers are not toxic.
NEUTRALIZING AGENT	: Not provided.

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4.6 HANDLING AND STORAGE

HANDLING AND STORAGE PRECAUTIONS : Store in a cool, dry, well ventilated area.

OTHER PRECAUTIONS : Not provided.

4.7 EXPOSURE CONTROLS / PERSONAL PROTECTION

RESPIRATORY PROTECTION : None expected to be necessary.

VENTILATION : Normal room ventilation.

PROTECTIVE GLOVES : None.

EYE PROTECTION : Safety glasses or splash goggles.

OTHER PROTECTIVE EQUIPMENT : As required to prevent prolonged contact.

WORK HYGIENIC PRACTICES : Use good industrial hygiene practice. Avoid unnecessary contact.

SUPPLEMENTAL SAFETY AND HEALTH : Not provided.

4.8 PHYSICAL AND CHEMICAL PROPERTIES

BOILING PT : Not Provided.

MELTING PT : 250 – 252 °C

VAPOR PRESS : Not Provided.

VAPOR DENSITY : Not Provided.

SPEC GRAVITY : 1.15

pH : N/A

VISCOSITY : Not Provided.

EVAPORATION RATE & REFERENCE : Not Applicable.

SOLUBILITY IN WATER : Insoluble.

APPEARANCE AND ODOR : White color with a knitting fabrics appearance, No odor.

PERCENT VOLATILES BY VOLUME : <1.0

CORROSION RATE : Not Applicable.

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4.9 STABILITY AND REACTIVITY

STABILITY INDICATOR / MATERIALS TO AVOID	: Strong acid, formic acid, phenols, cresol.
STABILITY CONDITION TO AVOID	: Melts at 250 °C
HAZARDOUS DECOMPOSITION PRODUCTS	: At temp > 660 °F : CO, CO ₂ , FRAGMENTS OF ORIGINAL MONOMER
HAZARDOUS POLYMERIZATION INDICATOR	: NO.
CONDITIONS TO AVOID POLYMERIZATION	: None noted.

4.10 TOXICOLOGICAL INFORMATION

NOT APPLICABLE

4.11 ECOLOGICAL INFORMATION

NOT APPLICABLE

4.12 DISPOSAL CONSIDERATION

NOT APPLICABLE

4.13 TRANSPORT INFORMATION

NOT APPLICABLE

4.14 REGULATORY INFORMATION

NOT APPLICABLE

4.15 OTHER INFORMATION


NOT APPLICABLE

UNCONTROLLED

Doc.No. : WCC-SDS-022/00

Issued Date : 25-Apr-16

Effectived Date : 25-Apr-16

Issued By : 
 (Engineer)

Checked By : 
 (Engineering Manager)

Apporoved By : 
 (Sr.Mgr /GM.)