

# MATERIAL SAFETY DATA SHEET

According to 91/155/EC

**Product:**  
Msd No.: 03E0003

**FLEX-162**  
Version 3.4

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Revision Date: 2016/12/4

## 01-IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND THE COMPANY/UNDERTAKING

NAME OF THE PREPARATION      FLEX-162  
SUPPLIER  
ADDRESS

TELEPHONE/FAX

EMERGENCY TELEPHONE NO.

## 02-COMPOSITION/INFORMATION ON INGREDIENTS

STARCH	18%-32%	CAS: 9005-25-8
ALIPHATIC-AROMATIC CO- POLYESTER	61%-75%	
ALIPHATIC POLYESTER	0%-10%	
PROCESSING ADDITIVES	0%-0.5%	
IMPURITIES CONTRIBUTING TO HAZARD	NONE	

## 03-HAZARDS IDENTIFICATION

HEALTH EFFECTS

Prolonged and/or repeated contacts: Risk of skin sensitization  
When handled at high temperatures, can cause serious burns

POTENTIAL HEALTH EFFECTS

Eye contact: Contact with eyes may cause irritation.  
Skin contact: Substance may cause slight skin irritation.  
Ingestion: Ingestion may cause gastrointestinal irritation, nausea,  
vomiting and diarrhea.  
Inhalation: Inhalation of dust may cause shortness of breath,  
tightness of the chest, a sore throat and cough. Low hazard for  
usual industrial or commercial handling.  
Target organ effects: There were no target organ effects noted  
following ingestion or dermal exposure in animal studies.

SPECIFIC HAZARDS/EC

No information available.

FLAMMABILITY

Fine dust dispersed in air may ignite.

ENVIRONMENTAL

Not determined.

PRECAUTION

## 04-FIRST AID MEASURES

EYE CONTACT

Rinse immediately with plenty of water, also under the eyelids, for  
at least 15 minutes. Call a physician immediately.

SKIN CONTACT

Rinse immediately with plenty of water for at least 15 minutes. If  
skin irritation persists, call a physician. Cool skin rapidly with cold  
water after contact with hot polymer.

INGESTION

Drink water as a precaution. Never give anything by mouth to an  
unconscious person. Do not induce vomiting without medical

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	advice. Call a physician immediately. Move to fresh air. Call a physician immediately.
<b>INHALATION</b>	
<b>05-FIRE FIGHTING MEASURES</b>	
<b>FLAMMABILITY</b>	Auto ignition temperature: >350 °C
<b>FLAMMABILITY LIMITS IN AIR</b>	Flammable limits in air – lower (%): Not applicable. Flammable limits in air – upper(%): Not applicable.
<b>EXTINGUISHING MEDIA</b>	Foam. Water. Carbon dioxide (CO <sub>2</sub> ). Dry chemical. Alcohol resistant foams are preferred if available. General-purpose synthetic foams (including AFFF) or protein foams may function, but much less effectively.
<b>SPECIFIC HAZARDS</b>	Above 300°C, possible formation of Styrene, Toluene, Ketones and Alcohols (small quantities) Formation of toxic products through combustion: Carbon oxides, Hydrogen bromide
<b>FIRE FIGHTING INSTRUCTIONS</b>	Keep people away, isolate fire area and deny unnecessary entry Cool surroundings with water to localize fire zone Cool containers/tanks with spray water. Water mist may be used to cool closed containers.
<b>OTHER INFORMATION</b>	Fine dust dispersed in air may ignite. Risks of ignites followed by flame propagation of secondary explosions shall be prevented by avoiding accumulation of dust, e.g. on floors and ledges.
<b>06-ACCIDENTAL RELEASE MEASURES</b>	
<b>PERSONAL PROTECTION</b>	Use personal protective equipment. Remove all sources of ignition. Avoid dust formation. Do not breathe vapors/dust Sweep up to prevent hazard slipping
<b>ENVIRONMENTAL PRECAUTIONS</b>	Do not flush into surface water of sanitary sewer system. Do not allow material to contaminate ground water system.
<b>METHODS FOR CLEANING UP</b>	Shovel into suitable container for disposal.
<b>07-HANDLING AND STORAGE</b>	
<b>HANDLING</b>	Prevent from fire around handling area. Workers should be protected from the possibility of contact with molten material during fabrication. Use personal protective equipment. Avoid accumulation of static charges during transfers in metallic systems. Use personal protective equipment.
<b>STORAGE</b>	Store in cool place. Keep at temperatures below 60°C. No special restrictions on storage with other products.
<b>08-EXPOSURE CONTROLS/PERSONAL PROTECTION</b>	
<b>ENGINEERING CONTROLS</b>	Where reasonably practicable this should be achieved by the use of local exhaust ventilation and good general extraction. Provide

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	appropriate exhaust ventilation at places where dust is formed.
EXPOSURE LIMIT	Not determined
<b>PERSONAL PROTECTION EQUIPMENT</b>	
Eye protection	Wear safety glasses for general purpose Wear chemical goggles for cleaning molding machines
Hand protection	Wear gloves (product handled in molten state)
Skin and body protection	Wear protective clothing (product handled in molten state)
Respiratory protection	In case of dust formation, wear a dust mask In case of insufficient ventilation, wear suitable respiratory equipment
Hygiene measures	Avoid contact with skin, eyes, and clothing.
<b>09-PHYSICAL AND CHEMICAL PROPERTIES</b>	
APPEARANCE	Solid (pellets)
COLOR	Opaque
ODOUR	Sweet
BOILING POINT/RANGE	Not applicable
VAPOUR PRESSURE	Not applicable
SOLUBILITY IN WATER	Insoluble
SPECIFIC GRAVITY	>1
<b>10-STABILITY AND REACTIVITY</b>	
STABILITY	Combustible gases are released at the temperature over 230°C
MATERIALS	Strong oxidizers
HAZARDOUS DECOMPOSITION PRODUCTS	Burning produces obnoxious and toxic fumes. Aldehydes. Carbon monoxide. Carbon dioxide.
POLYMERIZATION	Not applicable.
<b>11-TOXICOLOGICAL INFORMATION</b>	
See section 3 for potential health effects. For detailed toxicological data, write or call the address or emergency number shown in section 1	
<b>12-ECOLOGICAL INFORMATION</b>	
Mobility: No data available.	
Bioaccumulation: Does not bioaccumulate. Inherently biodegradable.	
<b>13-DISPOSAL CONSIDERATIONS</b>	
Controlled incineration or landfill according to local, state or national laws and regulations concerning health and pollution.	
<b>14-TRANSPORT INFORMATION</b>	
ADR/RID	Not regulated
AND/ADNR	Not regulated
IMDG	Not regulated
IATA	Not regulated

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Consult KINGFA's safety department for any further information

## 15-REGULATORY INFORMATION

WEEE/ROHS DIRECTIVE  
INVENTORIES

CONFORMS

EINECS (EU): Conforms

TSCA (USA): Conforms

DSL (Canada): Conforms

AICS (Australia): Conforms

ECL (Korea): Conforms

SAFETY DATA SHEETS

D.91/155/EEC amended by D.93/112/EEC and D.2001/58/CE

## 16-OTHER INFORMATION

This message is based on our present knowledge. However this will not constitute a guarantee for any specific products features and should not establish a legally valid contractual relationship.