Section 1 - Product and Company Identification

Product Name/Identifier : Robco Perfluoroplastic Coated Kevlar® Fabric
Other name / Synonym :
Company Information : Robco Inc.
Address : 7200 St.Patrick, LaSalle QC Canada H8N 2W7
Telephone : 514-367-2252
Email : info@robco.com
Website : www.robco.com

Section 2 - Hazards identification

CLASSIFICATION OF THE PRODUCT
Product is not classified as dangerous according to guideline 199/45/EG or regulation EC/1272/2008

LABELS ELEMENTS
Labelling according to EC/1272/2008 (substances)and 1999/45/EC (preparations)

GENERAL INFORMATION
Low risk: Product can only form ignitable mixtures or burn if it is heated or exposed to open flame at temperatures above the flash point.

OVERHEATING
Incorrect processing of PTFE above 325°C (620°F) can lead to the formation of low molecular decomposition products. It is therefore important to prevent overheating of molten material (see section 10)

FIRE HAZARD
Toxic gases are produced during burning (see section 10)

SPARKING
No risk of electrostatic charging

DANGER OF SLIPPING
Films or PTFE waste lying on the floor can cause a danger of slipping.

Section 3 - Composition/information on ingredients

CHEMICAL CHARACTERIZATION
Flexible laminate of following composition:

<table>
<thead>
<tr>
<th>Laminate</th>
<th>Remarks</th>
<th>CAS-No</th>
<th>Amount</th>
<th>Classification according EC/1272/2008</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>9002-84-0</td>
<td></td>
<td>Hazard classes/categories</td>
</tr>
</tbody>
</table>

FORM : Solid, flexible
COLOUR : Yellowish fabric with plastic-like surface
ODOUR : No odor
HAZARDOUS INGREDIENTS : None
Section 4 - First aid measures

INHALATION
Inhalation of fumes if product exposed to extreme temperatures: Remove patient from exposure, keep warm and at rest. Use suitable respiratory protection measures. If breathing is irregular or if it has stopped, proceed with artificial respiration. Obtain medical attention.

EYE CONTACT
This product is an inert solid. In case particles come into the eye, remove by irrigating with eye wash solution or clean water, holding the eyelids apart. Obtain medical attention.

SKIN CONTACT
With hot product: Cool the affected areas with plenty of cold water. Cover with a clean cloth or sterile gauze and call for medical help. Do not try to remove the product from the skin or remove soiled clothing as this may cause the injured skin tissue to be torn off.

INGESTION
First aid is normally not necessary.

MOST IMPORTANT SYMPTOMS AND EFFECTS, BOTH ACUTE AND DELAYED
None known

INDICATION OF ANY IMMEDIATE MEDICAL ATTENTION AND SPECIAL TREATMENT NEEDED
in case of unconsciousness: emergency call

Section 5 - Firefighting measures

EXTINGUISHING MEDIA
Water
Foam
Dry powder
Carbon dioxide

SPECIAL HAZARDS ARISING FROM THE PRODUCT
Combustion or thermal decomposition will involve toxic and corrosive vapours:
- Carbon monoxide (CO)
- Hydrogen fluoride
- Carbonyl fluoride
- Tetrafluoroethylene
- Hexafluoropropylene
- Perfluoroisobutene

ADVICE FOR FIREFIGHTERS
In the presence of combustion or carbonisation gases, any fire fighting, rescue and clearing up activities should be undertaken only with heavy-duty respiratory and eye protection equipment (see also sections 3, 8 and 10).

Section 6 - Accidental release measures

PERSONAL PRECAUTIONS, PROTECTIVE EQUIPMENT AND EMERGENCY PROCEDURES
No special measures required
Seek expert advice when disposing of collected material.
Caution when running over films on the floor. Danger of slipping.

ENVIRONMENTAL PRECAUTIONS
Observe to the legal requirements for waste disposal

METHODS AND MATERIAL FOR CONTAINMENT AND CLEANING UP
Collect the product in suitable containers and either recycle or dispose of.

REFERENCE TO OTHER SECTIONS
see also section 3, 8, 10

Section 7 - Handling and storage

PRECAUTIONS FOR SAFE HANDLING
General Hygienic Measures

CONDITIONS FOR SAFE STORAGE, INCLUDING ANY INCOMPATIBILITIES

TECHNICAL MEASURES AND STORAGE CONDITIONS
RISK OF ELECTROSTATIC CHARGING: Taking measures against
HANDLING: Avoid contact with naked flames and hot surfaces as irritant and toxic
decomposition products can be formed.
SAFE STORAGE: Storage on pallets in dry, enclosed rooms with solid foundation.
Stack products in cardboard boxes up to a maximum height of

FURTHER INFORMATION ON STORAGE CONDITIONS
STORAGE TEMPERATURE: Ambient temperature
STORAGE AND TRANSPORT PRESSURE: Atmospheric

SPECIFIC END USES
TRANSPORT TEMPERATURE: Ambient temperature, no special requirement for cold weather
LOADING AND UNLOADING TEMPERATURE: Ambient temperature
NORMAL FORM OF TRANSPORTATION: Pallets or goods wagons

Section 8 - Exposure controls/personal protection

EXPOSURE CONTROLS
None

PERSONAL PROTECTION EQUIPMENT:
Wear glove during manipulation materials lubricated with PTFE dispersion (not sintered). If contact with hot material is possible, wear heat proof cloves, arm and face shields.

HYGIENE MEASURES:
With sufficient ventilation on the working area and correct handling and processing no health risks are to be expected.
Section 9 - Physical and chemical properties

INFORMATION ON BASIC PHYSICAL AND CHEMICAL PROPERTIES
These are just recommended reference values. Please take the technical product specification into consideration

<table>
<thead>
<tr>
<th>PROPERTY</th>
<th>TEST CONDITIONS</th>
<th>VALUES</th>
<th>UNIT</th>
<th>REMARKS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Form</td>
<td>solid</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Colour</td>
<td></td>
<td>Yellowish fabric with plastic-like surface</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Odeur</td>
<td></td>
<td>no odor</td>
<td></td>
<td></td>
</tr>
<tr>
<td>pH</td>
<td>20°C</td>
<td>not applicable</td>
<td>°C</td>
<td></td>
</tr>
<tr>
<td>Melting/freezing point</td>
<td></td>
<td>+327 / -260</td>
<td>°C</td>
<td></td>
</tr>
<tr>
<td>Boiling point / range</td>
<td></td>
<td>not applicable</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Flash point</td>
<td></td>
<td>not applicable</td>
<td>°C</td>
<td></td>
</tr>
<tr>
<td>Evaporation rate</td>
<td></td>
<td>not applicable</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ignition point</td>
<td></td>
<td>not applicable</td>
<td>cC</td>
<td></td>
</tr>
<tr>
<td>Explosion limit (lower/upper)</td>
<td></td>
<td>not applicable</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Vapour pressure</td>
<td></td>
<td>not applicable</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Density</td>
<td></td>
<td>1.6</td>
<td>g/cm³</td>
<td></td>
</tr>
<tr>
<td>Water solubility</td>
<td></td>
<td>insoluble</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Partition coefficient (n-)</td>
<td></td>
<td>not applicable</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Octanol / Water</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Self ignition temperature</td>
<td></td>
<td>not applicable</td>
<td>°C</td>
<td></td>
</tr>
<tr>
<td>decomposition temperature</td>
<td></td>
<td>not applicable</td>
<td>°C</td>
<td></td>
</tr>
<tr>
<td>Viscosity</td>
<td></td>
<td>not applicable</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Explosive characteristics</td>
<td></td>
<td>not applicable</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Oxidising characteristics</td>
<td></td>
<td>not applicable</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

OTHER INFORMATIONS

<table>
<thead>
<tr>
<th>PROPERTY</th>
<th>TEST CONDITIONS</th>
<th>VALUES</th>
<th>UNIT</th>
<th>REMARKS</th>
</tr>
</thead>
<tbody>
<tr>
<td>hygroscopic characteristics</td>
<td></td>
<td>no</td>
<td></td>
<td></td>
</tr>
<tr>
<td>molecular weight</td>
<td></td>
<td>3.000 -</td>
<td>polymer</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>50.000</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Section 10 - Stability and reactivity

REACTIVITY
Product is not reactive under normal condition.

CHEMICAL STABILITY
Stable under normal conditions

POSSIBILITY OF HAZARDOUS REACTIONS
No hazardous reaction are expected
### CONDITION TO AVOID
Temperatures above 300°C

### INCOMPATIBLE MATERIALS
Do not bring into contact with: molten alkali metals, halogen compounds over 370°C

### HAZARDOUS DECOMPOSITION PRODUCTS
Thermal decomposition products are toxic and corrosive:
- carbon monoxide
- Hydrogen fluoride
- Carbonyl fluoride
- Tetrafluoroethylene
- Hexafluoropropylene
- Perfluoroisobutene

Reduced oxygen supply can cause the development of carbon monoxide and irritant smoke.

### Section 11 - Toxicological Information

#### INFORMATION ON TOXICOLOGICAL EFFECTS
According to present experience, the material is physiologically compatible. According to present experience, the material is neither mutagenic, cancerogenic nor teratogenic.

<table>
<thead>
<tr>
<th>Effect Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acute toxicity</td>
<td>The LD50 (oral, rat) was estimated to be 5 g/kg. This is a very low toxicity.</td>
</tr>
<tr>
<td>Skin irritation</td>
<td>None</td>
</tr>
<tr>
<td>Irritation/damage to eyes</td>
<td>Particle can damage the conjunctiva and cause irritation.</td>
</tr>
<tr>
<td>Sensitisation of the respiratory / skin</td>
<td>Low health risk under normal conditions. Contact with hot product may cause thermal burns.</td>
</tr>
<tr>
<td>Acterical count – mutagenicity</td>
<td>Not tested</td>
</tr>
<tr>
<td>Carcinogenity</td>
<td>Not tested</td>
</tr>
<tr>
<td>Reproductive toxicity</td>
<td>Not tested</td>
</tr>
<tr>
<td>Specific toxicity by one way exposure</td>
<td>because of the reaction inertness in a single exposure no toxic effect will be expected.</td>
</tr>
<tr>
<td>Specific toxicity by repeated exposure</td>
<td>long or frequent skin contact causes no extraordinary cutaneous reaction.</td>
</tr>
<tr>
<td>Hazard of aspiration</td>
<td>fumes and/or aerosols can be generated at high temperatures, which can irritate eyes and air-passages.</td>
</tr>
</tbody>
</table>
Section 12 - Ecological information

**TOXICITY**
No data available

**PERSISTENCE AND DEGRADABILITY**
Product is insoluble in water and not biodegradable

**BIOACCUMULATIVE POTENTIAL**
No data available

**MOBILITY IN SOIL**
No data available

**RESULTS OF PBT AND vPvB ASSESSMENT**
see point 2

**OTHER ADVERSE EFFECTS**
see point 2

**GENERAL INFORMATION:**
The material has no harmful effect on the environment

**WATER HAZARD CLASS:**
o (self estimation)

Section 13 - Disposal considerations

**WASTE TREATMENT METHODS**
PRODUCT: In accordance with the necessary technical and local regulations may be dumped with household waste without harmful effects to the environment.
RECYCLING: Recycling is not possible, except for larger, virgin grade sheet material.

Section 14 - Transport information

**UN-NUMBER**
GGVS I GGVE: non-hazardous material
ADR I RID: non-hazardous material

**TRANSPORT HAZARD CLASS(ES)**
None

**ENVIRONMENTAL HAZARDS**
GGVS/GGVE: non-hazardous material
ADR I RID: non-hazardous material
ICAO-TI I IATA-DGR: non-hazardous material
ADN/ADNR: non-hazardous material

**SPECIAL PRECAUTIONS FOR USER**
see section 6 - 8

**TRANSPORT IN BULK ACCORDING TO ANNEX II OF MARPOL73/78 AND THE IBC CODE**
Shipment and delivery only by legal and proper packing
Proper shipping name: not classified

Section 15 - Regulatory information

**SAFETY, HEALTH AND ENVIRONMENTAL REGULATIONS I LEGISLATION SPECIFIC FOR THE PRODUCT**

**EC-REGULATIONS**
Regulation (EC) Nr. 2037/2000 (Substances leading to decomposition of Ozone)
Regulation (EC) Nr. 850/2004 (Persistent organic substances)
Regulation (EC) Nr. 689/2008 (export and import of hazardous chemicals)
CHEMICAL SAFETY ASSESSMENT
   WATER HAZARD CLASS (WHC) : 0
   OTHER REGULATIONS : not applicable

Section 16 - Other information
   Changes of this version

Disclaimer :
The information provided in this Safety Data Sheet is correct to the best of our knowledge,
information and belief at the date of its publication. The information given is designed only as
guidance for safe handling, use, storage, transportation and release and is not considered a
warranty or quality specification. The responsibility for the compliance with existing law and
regulations lies with the receiver of the product.