MATERIAL SAFETY DATA SHEET
according to 1907/2006/EC, Article 31

DATE PREPARED: 2012-3-8 MSDS Number: Q/JS J0520-2012

<table>
<thead>
<tr>
<th>Standard Code</th>
<th>Replaced Standard</th>
<th>Main Drafter</th>
<th>Assessor</th>
</tr>
</thead>
<tbody>
<tr>
<td>J125-01</td>
<td>Q/JS J0520—2010</td>
<td>hantao</td>
<td>Kong Jianwei</td>
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<table>
<thead>
<tr>
<th>Version</th>
<th>Modification</th>
<th>Release Date</th>
<th>Implement Date</th>
<th>Modify The Implement Date</th>
<th>Standardization Censor</th>
<th>Ratifier</th>
<th>Date</th>
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<tr>
<td>NO.3</td>
<td>NO.0</td>
<td>2012-3-8</td>
<td>2012-3-8</td>
<td>/</td>
<td>liziqian</td>
<td>Chen Jiming</td>
<td>03-07</td>
</tr>
</tbody>
</table>

SECTION 1 – CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

CHEMICAL PRODUCT IDENTIFICATION:
Continuous Glass Fiber Products, Including Assembled Roving, Direct Roving, Dry Chopped Strands, Wet Chopped Strands, Woven Roving, Stitch Chopped Strand Mat, Power Chopped Strand Mat, Emulsion Chopped Strand Mat, Stitch Combo Mat, Woven Roving Combo Mat, Glass Filament Yarn, Marketable Cake, Cut Strands, Texturized Yarn.

MANUFACTURER INFORMATION:
JUSHI GROUP CO., LTD.
NO.669 Wenhua Rd.(S.), Tongxiang Economic Development Zone, Zhejiang 314500, China

FAX NUMBER
Customer Service: +86-573-88181388
International Sales: +86-573-88181058
Domestic Sales: +86-573-88136222

COMPANY EMERGENCY TELEPHONE: (8:30-16:40 In BeiJing, from Monday to Saturday)
Customer Service: +86-573-88136367
International Sales: +86-573-88181025
Domestic Sales: +86-573-88181016
E-mail: services@jushi.com

Jushi Spain, S.A.
Jushi(India) FRP Accessories Private Limited
310 CREATIVE INDUSTRIAL ESTATE N/M. JOSHI MARG MUMBAI 420011 India
TELEPHONE: 0091 224 033 5375/ 224 033 5333
FAX NUMBER: 0091 224 033 5334
E-mail: vishal@jushifrp.com

Jushi Group Sinosia SA Composite Materials
4/65 Nerl Hare Road, Atlantis Industrial 7350, Capetown, South Africa
TELEPHONE: 27 21 5772747/00852 2541 1114
FAX NUMBER: 27 21 5772727
E-mail: w_w9@mweb.co.za / info@jushisinosia.co.za

Jushi Italy SRL
VIA ADIGE 10/12 21043 CASTIGLIONE OLONA (VA)
TELEPHONE: 0039 0331857918
FAX NUMBER: 0039 0331825521
E-mail: essebi@jushiitaly.it

Jushi Canada Fiberglass Co., Ltd.
Markham, Toronto Canada
TELEPHONE: 001 9054777628
FAX NUMBER: 001 9054776047
E-mail: a.gardiner@jushicanada.com

JUSHI France SAS
65 RUE DU DAUPHINE 69800 SAINT-PRIEST France
TELEPHONE: 33 4 72 78 20 48/33 (0) 4 7278 20 62
JUSHI SINGAPORE PTE. LTD
10 UBI CRESCENT, #05-70 (LOBBY D) UBI TECHPARK, SINGAPORE 408564
TELEPHONE: 65 67425118
FAX NUMBER: 65 6742 7108
E-mail: hsseng@jushi.com

HELM AG Hamburg
Nordkanal Strasse 28 D-20097 Hamburg Germany
TELEPHONE: 49 40 2375 1330
FAX NUMBER: 49 40 2375 1845
E-mail: e.kloevekorn@helmag.com

Gibson Enterprises, Inc. DBA JUSHI USA
4982 4th Street Irwindale, CA 91706 U.S.A.
TELEPHONE: (626) 960-2038
FAX NUMBER: (626) 960-2037
E-mail: alan.gardiner@jushiusa.com
If you couldn't contact one of them, please call the company emergency telephone.

**MSDS NUMBER:**
Q/JS J0520

**EFFECTIVE DATE:**
March 8, 2012

### SECTION 2 – COMPOSITION / INFORMATION ON INGREDIENTS

**Ingredients of Products:**

<table>
<thead>
<tr>
<th>Product Name</th>
<th>Glass, %</th>
<th>Size, %</th>
<th>Binder, %</th>
<th>Water, %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Assembled Roving</td>
<td>98.0~99.5</td>
<td>0.05~1.80</td>
<td>/</td>
<td>0~0.20</td>
</tr>
</tbody>
</table>
**SECTION 3 – HAZARDS IDENTIFICATION**

With regard to its composition, these products are articles and not classified as hazardous according to European Directive 67/548/EEC and 99/45/EC and ST/SG/AC.10/30/Rev.2 and their latest amendments.

**Classification of Hazards:**
No information available.

**Routes of Entry:**
Ingestion, inhalation, skin and eye contact.

**Health Effects:**
Ingestion: Ingestion of the material is unlikely. However, ingestion of the material...
Inhalation: Breathing fiberglass dusts and particulates may cause irritation of the nose, throat and respiratory tract.

Skin contact: Fiberglass dusts and particulates may cause temporary irritation.

Eye contact: Fiberglass dusts and particulates may cause temporary irritation to the eyes.

Environmental Effects:
Long-term exposure to fiberglass environment may cause temporary effects.

Inflammation and Explosion Hazards:
No information available.

SECTION 4 – FIRST-AID MEASURES

Skin Contact:
If irritation occurs to the skin, rinse with soap and water. Make sure to refrain from rinsing with warm water since warm water will make the skin pores open to allow fiberglass to penetrate more deeply. If fiberglass penetrates the skin, use a wash cloth to help pull out the fiberglass. To avoid further irritation, do not rub or scratch affected skin. If irritation persists, get medical help. Make sure to refrain from using compressed air to remove fiberglass from the skin.

Eye Contact:
Immediately flush eyes with clean water for at least 15 minutes. If irritation persists, get medical help.

Inhalation:
If inhaled, immediately remove the affected person to fresh air. If irritation persists, get medical help.

Ingestion:
Normally, ingestion of this material is unlikely. If it does occur, watch the person for several days to make sure that gastrointestinal disturbance does not occur. Do not let the person vomit unless required by medical personnel. If disturbance persists, get medical help.

SECTION 5 – FIRE-FIGHTING MEASURES

Flammability Classification:
Non-flammable. But the size and packing material may burning.
Hazardous Combustion Products:

Primary combustion products are carbon monoxide, hydrogen, carbon dioxide and water. Other undetermined compounds can be released in small quantities.

Fire-Fighting Methods:

Use dry chemical, foam, carbon dioxide and water as extinguishing media.

Fire-Fighting Instructions:

Fire fighters must use self-contained breathing apparatus and wear full protective gear.

SECTION 6 – ACCIDENTAL RELEASE MEASURES

In case of release to land, the material should be scooped up as waste and put into a special container and stored in a designated area. In case of release of water, the material will sink and disperse along the bottom of waterways or ponds and can not be easily removed after it is waterborne. However, the material is non-hazardous in water.

SECTION 7 – HANDLING AND STORAGE

Handling:

Try to prevent the packing material from be damaged and keep the product inside the packing material to minimize the generation of dusts. Maintain a clean work environment and avoid generation of fiberglass fragments from improper handling.

Storage:

Keep product in its packaging until use to minimize potential dust generation.

SECTION 8 – EXPOSURE CONTROLS / PERSONAL PROTECTION

Highest Permissible Concentration:

National and international hygiene standards are as follows:

<table>
<thead>
<tr>
<th>Component</th>
<th>Permissible Exposure Limit of OSHA (8-hr Average Weight)</th>
<th>Permissible Exposure Limit of ACGIH (8 hr Average Weight)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Dust</td>
<td>15 mg/m³</td>
<td>10 mg/m³</td>
</tr>
<tr>
<td>Respirable particulates</td>
<td>5 mg/m³</td>
<td>3 mg/m³</td>
</tr>
</tbody>
</table>
Engineering Control:
Production areas are closed off and a required relative humidity is maintained.

Respiratory Protection:
Wear a suitable mask when working in an environment where dust concentration is high.

Eye Protection:
Wear safety glasses and face shield.

Body Protection:
Normal loose working clothing (long-sleeved shirts and long pants) is recommended. Skin irritation occurs primarily at the contact areas such as around the neck and waist.

Hand Protection:
Wear gloves. Skin irritation occurs primarily at the contact areas such as wrists and between the fingers.

SECTION 9 – PHYSICAL AND CHEMICAL PROPERTIES

<table>
<thead>
<tr>
<th>Product Appearance and Properties:</th>
<th>Flash Point:</th>
</tr>
</thead>
<tbody>
<tr>
<td>White or off-white solid; No odor.</td>
<td>Not applicable</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>pH Value:</th>
<th>Ignition Temperature:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not applicable.</td>
<td>Not applicable.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Melting Point:</th>
<th>Explosion Upper Limit:</th>
</tr>
</thead>
<tbody>
<tr>
<td>&gt;800°C.</td>
<td>Not applicable.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Boiling Point:</th>
<th>Explosion Lower Limit:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not applicable.</td>
<td>Not applicable.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Relative Density:</th>
<th>Solubility (in Water):</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.6 Times that of water.</td>
<td>Insoluble</td>
</tr>
</tbody>
</table>

| Relative Vapor Density: | |
|-------------------------| |
| Not applicable.         | |

<table>
<thead>
<tr>
<th>Product Use:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fiberglass is an inorganic nonmetal material and is used as Plastics reinforcement and acoustical insulation.</td>
</tr>
</tbody>
</table>
SECTION 10 – STABILITY AND REACTIVITY

Stability:
   This is a Stable material.

Materials to Avoid:
   None.

Conditions to avoid:
   None.

Hazardous Polymerization
   Will not occur.

SECTION 11 – TOXICOLOGICAL INFORMATION

Acute Toxicity:
   None.

Irritability:
   Fiberglass dusts may cause irritation to skin and eye. Ingestion of fiberglass may cause irritation to the throat, stomach and gastrointestinal tract. Inhalation may cause coughing, sneezing and nose and throat irritation. Experience indicates that inhalation of a large amount of fiberglass may cause difficulty in breathing, congestion and chest tightness.

Carcinogenicity:
   The International Agency for Research on Cancer (IARC), agency of the World Health Organization (WHO), has determined that fiberglass is a non-carcinogenic material because the evidence is inadequate to prove that fiberglass can cause humans and experimental animals to develop cancer.

SECTION 12 – ECOLOGICAL INFORMATION

No data available for this product. Fiberglass products are not listed as a material harmful to animals, plants and fish.

SECTION 13 – DISPOSAL CONSIDERATIONS
MATERIAL SAFETY DATA SHEET
according to 1907/2006/EC, Article 31

DATE PREPARED: 2012-3-8 MSDS Number: Q/JS J0520-2012

RCRA Hazard class:
Non-hazardous.

Disposal Instructions:
Dispose waste material according to local environmental regulations.

DESECTION 14 – TRANSPORT INFORMATION

Classification and Code of Hazards:
None.

UN Code:
None.

Packing Mark:
None.

Packing Category:
None.

Packing Method:
None.

Transport Instructions:
Rolling and moisture should be avoided in transit.

SECTION 15 – REGULATORY INFORMATION

SARA title III:

Hazard categories:
Acute health: Yes
Chronic health: No
Fire hazard: No
Pressure hazard: No
Reactivity hazard: No

Reportable ingredients:
Sec.302/304: None
Clean Air Act:
No ingredient is listed.

WHMIS(Canada) Status:
No controlled.

WHMIS classification(s):
None.

National chemicals inventories
Based on the rules enforced with regards to the marketing and use of chemicals in countries where our Jushi products are manufactured, each chemical ingredient of these finished products has to be listed on the National Chemicals Inventory of the specific country where produced.

However, glass fiber products are articles under the chemicals inventories listed below and consequently are exempt from listing on these inventories:

- The European Inventory of Existing Chemical Substances: EINECS/ELINCS,
- The US EPA Toxic Substance Control Act: TSCA,
- The Canadian Chemical Registration Regulations: NDSL/DSL,
- The Japanese Chemical Substances Control Law under METI: CSCL,
- The Australian Inventory of Chemical Substances: AICS,
- The Philippine Inventory of Chemicals and Chemical Substances: PICCS,
- The Korean Existing Chemicals List: (K)ECL and
- The Chinese List on New Chemical Substances.

SECTION 16 – OTHER INFORMATION

Preparation Date:
March 2012

Prepared by:
Quality Assurance Dept., Jushi Group Co., Ltd.

Data Verified by:
Assistant To President of Jushi Group Co., Ltd

Modification Information:
Second Version
SECTION 1: PRODUCT AND COMPANY IDENTIFICATION
Product name: Vectorply Fiberglass Fabrics
Supplier Name: Vectorply Corporation
Address: 3500 Lakewood Dr.
Phenix City, AL 36867 USA
www.vectorply.com
Company Phone Numbers: 1-800-577-4521 (US) Monday-Friday 8:30am - 5:30pm EST
01-334-291-7704 (Outside US) Monday-Friday 8:30am - 5:30pm EST
* Vectorply Corp. does not manufacture any of the component parts of the products covered by this SDS. This SDS is a compilation of the SDS data furnished by these manufacturers. SDS information for component parts can be made available upon request.

SECTION 2: HAZARDS IDENTIFICATION
EMERGENCY OVERVIEW:
Appearance/Odor: Odorless, white or off-white glass fiber fabric with white polyester stitching

WARNING!
MAY CAUSE SKIN IRRITATION
MAY CAUSE EYE IRRITATION
MAY CAUSE UPPER RESPIRATORY TRACT IRRITATION

Potential Health Effects: See Section 11 for more information.
Likely Routes of Exposure: Eye contact, skin contact, Inhalation.
Inhalation: Irritation of the upper respiratory tract (scratchy throat), coughing, and congestion may occur in extreme exposures.
Ingestion: This product is not intended to be ingested (eaten). If ingested, it may cause temporary irritation to the gastrointestinal (digestive) tract.
Skin: Temporary irritation (itching) or redness may occur.
Eyes: Temporary irritation (itching) or redness may occur.
Medical conditions aggravated by exposure: Pre-existing chronic respiratory, skin, or eye diseases / conditions.
Regulatory Status: This material is considered hazardous by the OSHA Hazard Communication Standard (29CFR 1910.1200)
Carcinogenicity: As supplied, this product does not contain respirable glass fibers. According to an animal study, repeated or prolonged exposure to respirable glass fibers may cause fibrosis, lung cancer, and mesothelioma.
See section 11 for a more information.

Environmental: There is no known ecological information for this material, see section 12 for more information

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS
Component: CAS #: % by Wt.
Sizing: Not Available: 0 - 5
Polyester Veil: 25038-59-9: 0-20
Fiber Glass (Continuous filament, non respirable): 65997-17-3: 80-100

SECTION 4: FIRST AID MEASURES
Inhalation: Remove to fresh air. Seek medical attention if irritation persists. If not breathing, if breathing is irregular or if respiratory arrest occurs, get medical attention, provide artificial respiration or oxygen by trained personnel.
Ingestion: Ingestion of this product is unlikely. If swallowed, rinse mouth with water (only if person is conscious).
Skin Contact: Get medical attention immediately if irritation develops and persists.
Eye Contact: Immediately flush eyes with plenty of water for at least 15 minutes. If easy to do, remove contact lenses, if worn. Get medical attention immediately if irritation persists.
SECTION 5: FIRE FIGHTING MEASURES

Suitable Extinguishing Media: Dry chemical, foam, carbon dioxide (CO2), water fog.

Unsuitable Extinguishing Media: None known.

Products of Combustion: Carbon monoxide, carbon dioxide, hydrogen, other undetermined compounds could be released in small quantities.

Protection of Firefighters: Firefighters should wear self-contained breathing apparatus (SCBA) and full fire-fighting turnout gear.

SECTION 6: ACCIDENTAL RELEASE MEASURES

Personal precautions: Use personal protection recommended in Section 8.

Environmental Precautions: No special precautions are needed in case of a release or spill.

Methods for Containment: This material will settle out of air. Prevent from spreading by covering, diking, or other means.

Methods for Clean-up: This material will settle out of air. Pick up large pieces, carefully sweep or vacuum remaining material and place in suitable container. Avoid generating dust.

Other Information: Dispose of as solid waste in accordance with local, state, and federal regulations.

SECTION 7: HANDLING AND STORAGE

Handling: Use appropriate personal protective equipment (See section 8). Avoid dust generation.

Avoid contact with skin and eyes. Do not breathe dust. Do not swallow.

Storage: Store in accordance with local, state, and federal regulations. Keep product in its packaging to avoid dust generation. Store at or below 25°C (77°F) and relative humidity less than 65% for optimum performance.

SECTION 8: EXPOSURE CONTROL/PERSONNEL PROTECTION

Exposure Limits

Fiber Glass:
TLV-TWA: 1 f/cc, 10mg/m3 Total dust, 3 mg/m3 respirable (ACGIH)
PEL-TWA: 15 mg/m3 total dust, 5 mg/m3 respirable (OSHA)
TWAEV: 1 f/cc respirable, 5 mg/m3 inhalable (Ontario Canada)
TWA: 10 mg/m3 (Mexico)

Polyester:
Not Available

Engineering Controls: Use local/general exhaust ventilation as required to keep airborne concentrations below exposure limits.

Eye/face Protection: Safety glasses with side-shields.

Skin Protection: Long pants, long sleeved shirt, and protective gloves.

Respiratory Protection: Respiratory protection must be used if ventilation is not available or inadequate to keep dust and fiber levels below exposure levels listed in section 8. A NIOSH approved disposable N95 type dust respirator or better is recommended.

General Hygene Considerations: Wash hands immediately after handling product and before breaks. Wash contaminated clothes thoroughly before reuse.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Appearance: White or off-white fabric

Odor: Odorless

Odor Threshold: N/A

Physical State: Solid

pH: Not available

Melting Point: >800°C (glass), 250-300°C (Polyester)

Initial Boiling Point and Boiling Range: Not available

Flash Point: Not available

Evaporation Rate: Not available

Flammability: Not available

Flammability or Explosive Limits: Not Available

Vapor Pressure: Not Available

Specific Gravity: 2.60 (glass), 1.68 (polyester) (Ref: water = 1.00)

Solubility: Insoluble

Partition Coefficient: Not Available

Autoignition Temperature: Not Available

Decomposition Temperature: Not Available
SECTION 10: STABILITY AND REACTIVITY
Stability: Stable under normal conditions.
Conditions to avoid: No specific data.
Incompatible Materials: None known.
Hazardous Decomposition products: Under normal conditions of storage and use, hazardous decomposition products should not be produced.
Possibility of Hazardous Reactions: Will not occur.

SECTION 11: TOXICOLOGICAL INFORMATION
Summary:
There are no known health effects from the long term use or contact with nonrespirable, continuous filament glass fibers. As manufactured, the glass fibers in this product are nonrespirable. Continuous filament glass fibers that are chopped, crushed, or severely mechanically processed during manufacturing or use may contain a very small amount of respirable particulate, some of which may be glass shards. The measured airborne concentration of these respirable fibers in areas where severe processing of fiberglass occurred has been shown to be extremely low and well below the TLV. Based on an animal study, repeated or prolonged exposure to respirable glass fibers may cause fibrosis lung cancer, and mesothelioma.

SECTION 12: ECOLOGICAL INFORMATION
Environmental Effects: No known significant effects or critical hazards.
Other Adverse Effects: No known significant effects or critical hazards.

SECTION 13: DISPOSAL CONSIDERATIONS
Waste Disposal:
If this product as supplied becomes a waste, it does not meet the criteria of a hazardous waste as defined under the Resource Conservation and Recovery Act (RCRA) 40 CFR 261. Dispose of as solid waste in accordance with local, state, and federal regulations.

SECTION 14: TRANSPORT INFORMATION
Transport Regulations:
This product is not classified as dangerous goods according to international transport regulations.

SECTION 15: REGULATORY INFORMATION
Global Inventories
TSCA: United States
DSL: Canada
KECI: Korea
PICCS: Philippines
ENCS: Japan
AICS: Australia
IECSC: China
REACH: European Union

United States
SARA 302/304/311/312 extremely hazardous substances: No products were found.
SARA 302/304 emergency planning and notification: No products were found.
SARA 302/304/311/312 hazardous chemicals: No products were found.
CERCLA Hazardous substances: No products were found.

SARA 311/312 MSDS Distribution - Chemical Inventory - Hazard Identification:
Chemical Name        CAS#    Acute    Chronic    Fire    Reactive    Pressure
Fiber Glass          65997-17-3    Y        Y        N        N        N
Product as-supplied

Canada
WHMIS (Canada)        None identified.
SECTION 16: ADDITIONAL INFORMATION

HMIS Health Hazard: 1
HMIS Flammability Hazard: 0
HMIS Reactivity: 0
HMIS Personal Protection: X

Disclaimer: Vectorply Corp. does not manufacture any of the component parts of the products covered by this SDS. This SDS is a compilation of the SDS data furnished by these manufacturers. SDS information for component parts can be made available upon request.

The information and data contained in this SDS are presented in good faith and believed to be reliable. Nothing herein shall be deemed to constitute a warranty, expressed or implied, that said information or data are correct or that the products described are merchantable or fit for a particular purpose, or that said information, data, or products can be used without infringing patents of third parties.
Material Safety Data Sheet
according to Directive EC 1907/2006

Product: Lantor ® Coremat XM, XS

0. Introduction
This document provides a Material Safety Data Sheet (MSDS) for nonwovens on a voluntary basis according to EDANA recommendations (Guidelines/instructions relating to MSDS for nonwovens 10/GVS/422). The MSDS is a means of transferring essential hazard information (including information on transport, handling, storage and emergency actions) from the supplier of a nonwoven product to the recipient of the product. As nonwovens are generally not hazardous, MSDS for nonwovens is not legally requested but must be considered as information. It is inspired from the EC recommendation for MSDS EC 1907/2006.

1. Identification of the product and the company

1.1. Identification of the product(s)
Product name: Lantor Coremat XM
Product Code: M55002, M55003, M55004, M55010
Product name: Lantor Coremat XS
Product Code: X51002, X51003

1.2. Intended use of the product
Core material and print through barrier in FRP-applications.

1.3. Company identification
Company/Plant where information on the product safety is available:
Name: Lantor BV/Lantor®
Address: P.O. Box 45, NL-3900 AA Veenendaal, The Netherlands
Phone number: +31(0) 318 537111
Fax number: +31(0) 318 537399

Department/person responsible for the product safety:
Name: Lantor B.V. Composites
Address: P.O. Box 45, NL-3900 AA Veenendaal, The Netherlands
Phone number: +31(0) 318 537111
Fax number: +31(0) 318 537420

2. Hazards identification
No hazardous product under normal conditions.
Accidental thermal decomposition or melting state can present hazards.

3. Composition / Information on ingredients
Identification of the type of nonwoven product:

3.1. Nonwoven
Carded web, chemically bonded.

3.2. Nature of the fibre(s)
Polyester (PES)

3.3. Web surface treatment - Concentration above 1%
Acrylic binder.

The information contained in this Material Safety Data Sheet has been compiled by the Company in the normal course of its business and is for
information purposes only. Therefore, the Company does not warrant nor assume any liability with respect to the correctness or completeness of the information
provided in this Material Safety Data Sheet. The user is responsible for his/her own decision to use the information provided in this Material Safety Data Sheet. It is
therefore strongly recommended that the user consults the data sheet for full information on the safety of this product.
3.4. **Binder**  
Acrylic binder.

3.5. **Additives**  
<table>
<thead>
<tr>
<th>Copolymer</th>
<th>CAS nr 25214-39-5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Iso-butane</td>
<td>CAS nr 75-28-5</td>
</tr>
</tbody>
</table>

3.6. **Other major components - Concentration above 1% - None**  
None.

3.7. **Chemicals (in relevant concentration) that are in the list of dangerous substances.**  
None.

4. **First aid measures**  
4.1. **Inhalation**  
By inhalation of microspheres, move person to fresh air.

4.2. **Skin contact**  
No specific measure to be taken.

4.3. **Eyes contact**  
Eyes should be flushed out with water.

4.4. **Ingestion**  
Unlikely. In case of ingestion, get medical help.

5. **Fire fighting measures**  
5.1. **Suitable extinguishing media**  
Water, water/foam, CO₂.

5.2. **Extinguishing-media not to be used**  
Water in case short-circuiting is the cause of the fire.

5.3. **Special exposure hazard**  
For flammable and toxic fumes as well as skin contact with molten materials see section 10.

5.4. **Special protective clothing for fire-fighter**  
No special requirement.

6. **Accidental release measures**  
Not applicable.

7. **Handling and storage**  
Keep Lantor Coremat® in the original package. Store in a cool and well ventilated area. The temperature should be above 0 °C but must not exceed +30 °C.

8. **Exposure controls / personal protection**  
General room ventilation is recommended.
9. Physical and chemical properties
   Appearance (the colour of the product as supplied): Off white
   Odour: Neutral
   pH: Not applicable
   Boiling point/boiling range: Not applicable
   Melting point/melting range: 250 - 265 °C (PES fibres)
   Decomposition temperature: 450 °C
   Flash point: Not applicable
   Flammability: Not easily flammable (see section 10)
   Autoignitability (temperature): > 450 °C
   Explosive properties: Not applicable
   Oxidizing properties: Not applicable
   Vapour pressure: Not applicable
   Relative density: Not applicable
   Solubility: - water solubility: Insoluble in water
               - fat solubility: Not applicable
   Partition coefficient: n-octanol/water: Not applicable

10. Stability and reactivity
    The material is chemically stable.

    Under thermal decomposition flammable and toxic fumes can be generated. The generation of
    cleavage and oxidation products is subject to fire conditions. Non burned residues and
    contaminated water after fire fighting should be disposed of in compliance with official regulations.
    Molten material should not be allowed to be in contact with the skin to which it can cause burns.

11. Toxicological information
    Acute toxicity: None
    Local effect: None
    Chronic short and long term toxicity: None
    Note: Under decomposition conditions; toxic fumes and contaminated water, see section 10.

12. Ecological information
    There is no indication that this material is a risk to the environment. This material is water
    insoluble.

13. Disposal considerations
    As on hazardous solid waste, nonwovens can be disposed of, depending on local legislation,
    through recycling, incineration or landfill.

14. Transport information
    Not classified as hazardous for transport.
    Keep the material dry during transport.

15. Regulatory information
    None.

16. Other information
    None.
0. Introduction
This document provides a Material Safety Data Sheet (MSDS) for nonwovens on a voluntary basis according to EDANA recommendations (Guidelines/instructions relating to MSDS for nonwovens 10/GV8/422). The MSDS is a means of transferring essential hazard information (including information on transport, handling, storage and emergency actions) from the supplier of a nonwoven product to the recipient of the product. As nonwovens are generally not hazardous, MSDS for nonwovens is not legally requested but must be considered as information. It is inspired from the EC recommendation for MSDS EC 1907/2006.

1. Identification of the product and the company

1.1. Identification of the product(s)
Product name: Lantor Soric XXF
Product Code: XXF015, XXF020

Product name: Lantor Soric XF
Product Code: XF1002, XF1003, XF1004, XF1005, XF1006

Product name: Lantor Soric SF
Product Code: SF1002, SF1003

Product name: Lantor Soric TF
Product Code: TF1015, TF1002, TF1003

Product name: Lantor Soric LRC
Product Code: LRC115, LRC102, LRC103

1.2. Intended use of the product
Liner / core material in FRP-applications.

1.3. Company identification

Company/Plant where information on the product safety is available:
Name: Lantor BV/Lantor®
Address: P.O. Box 45, NL-3900 AA Veenendaal, The Netherlands
Phone number: +31(0) 318 537111
Fax number: +31(0) 318 537399

Department/person responsible for the product safety:
Name: Lantor B.V. Composites
Address: P.O. Box 45, NL-3900 AA Veenendaal, The Netherlands
Phone number: +31(0) 318 537111
Fax number: +31(0) 318 537420

2. Hazards identification
No hazardous product under normal conditions.
Accidental thermal decomposition or melting state can present hazards.
3. Composition / Information on ingredients
   Identification of the type of nonwoven product:

   3.1. Nonwoven
       Carded web, chemically bonded.
   3.2. Nature of the fibre(s)
       Polyester (PES)
   3.3. Web surface treatment - Concentration above 1%
       Cured acrylic binder.
   3.4. Binder
       Acrylic binder.
   3.5. Additives
       Copolymer CAS nr 38742-70-0
       Iso-pentane CAS nr 78-78-4
   3.6. Other major components - Concentration above 1% - None
       None.
   3.7. Chemicals (in relevant concentration) that are in the list of dangerous substances.
       None.

4. First aid measures
   4.1. Inhalation
       By inhalation of microspheres, move person to fresh air.
   4.2. Skin contact
       No specific measure to be taken.
   4.3. Eyes contact
       Eyes should be flushed out with water.
   4.4. Ingestion
       Unlikely. In case of ingestion, get medical help.

5. Fire fighting measures
   5.1. Suitable extinguishing media
       Water, water/foam, CO₂.
   5.2. Extinguishing-media not to be used
       Water in case short-circuiting is the cause of the fire.
   5.3. Special exposure hazard
       For flammable and toxic fumes as well as skin contact with molten materials see section 10.
   5.4. Special protective clothing for fire-fighter
       No special requirement.

6. Accidental release measures
   Not applicable.

7. Handling and storage
   Keep Lantor Soric ® in the original package. Store in a cool and well ventilated area. The temperature
   should be above 0 °C but must not exceed +30 °C.

8. Exposure controls / personal protection
   General room ventilation is recommended.

9. Physical and chemical properties
   Appearance (the colour of the product as supplied): Off-white
Odour : Neutral
pH : not applicable
Boiling point/boiling range : not applicable
Melting point/melting range : 250 – 265 °C (PES fibres)
Decomposition temperature : 450 °C
Flash point : not applicable
Flammability : not easily flammable (see section 10)
Auto-flammability (temperature) : > 450 °C
Explosive properties : not applicable
Oxidizing properties : not applicable
Vapour pressure : not applicable
Relative density : not applicable
Solubility: - water solubility : insoluble in water
- fat solubility : not applicable
Partition coefficient: n.octanol/water : not applicable

10. Stability and reactivity
The material is chemically stable. Under thermal decomposition flammable and toxic fumes can be generated. The generation of cleavage and oxidation products is subject to fire conditions. Non burned residues and contaminated water after fire fighting should be disposed of in compliance with official regulations. Molten material should not be allowed to be in contact with the skin to which it can cause burns.

11. Toxicological information
Acute toxicity: None
Local effect: None
Chronic short and long term toxicity: None
Note: Under decomposition conditions; toxic fumes and contaminated water, see section 10.

12. Ecological information
There is no indication that this material is a risk to the environment. This material is water insoluble.

13. Disposal considerations
As on hazardous solid waste, nonwovens can be disposed of, depending on local legislation, through recycling, incineration or landfill.

14. Transport information
Not classified as hazardous for transport. Keep the material dry during transport.

15. Regulatory information
None.

16. Other information
None.