

Material Safety Data Sheet

HANWHA L&C CORPORATION

Date Of Issue : September 6, 2015

1. Product and company identification

(a) Product Name : BODAQ Interior Film

(b) Manufacturer / Supplier :

- Hanwha L&C Corporation
- 26 Uljiro 5 Gil, Chung-gu, Seoul, Korea
- Tel : +82 80-729-8272
- Fax : +82 2-6364-7709

2. Composition / Information on Ingredients

Component	CAS No.	% By Weight
Polyvinyl Chloride	9002-86-2	74~78%
Fire Retardant		(Confidential Business Info.)
Diocetyl Terephthalate	6422-86-2	14~18%
Stabilizer		2~4%
CaCO ₃	471-34-1	1~3%
Others		3~5%

3. Hazards Identification

(a) Effects of Skin contact : Irritation may occur.

(b) Effects of Eye contact : Heavy irritation may occur.

(c) Effects of respiratory system contact : Irritation may occur.

(d) Skin rash may occur in case of long term exposure.

4. First aid measure

(a) Eye contact :

- Get medical attention if irritation develops or persists.
- Immediately flush eyes with plenty of water for at least 20 minutes.

(b) Skin contact :

- Remove contaminated clothes and shoes, Isolate soiled region.
- Immediately flush eyes and skin with plenty of water for at least 20 minutes.
- Prevent diffusion of soiled part in case of slight skin contact.
- Get medical attention if irritation develops or persists.

(c) Inhalation :

- Move to the place with fresh air
- Do artificial respiration in case of apnea.
- Supply oxygen in case of dyspnea.
- Be warm and take comfort
- Get medical attention if irritation develops or persists.

(d) Ingestion : Get medical attention if irritation develops or persists.

(e) Notes to Physician : Physician may recognize relevant material and take measure to protect inhaler.

5. Fire-Fighting measures

(a) Suitable (and unsuitable) extinguishing media:

- Use water spray or carbon dioxide, alcohol foam in case of extinguishment related to this material.
- Use dried sand or soil in case of extinguishment by smothering.

(b) Specific hazards arising from the chemical (e.g. nature of any hazardous combustion products):

- Toxic gas may occur when decomposed at high temperature.
- A part of material may be burnt down but it doesn't ignite easily.
- Inflammable : Material itself isn't burnt down but it may occur corrosive/toxic fume if decomposed by heat.

(c) Special protective equipment and precautions for fire-fighters:

- Extinguish the flames while keeping a safe distance from the ignition point.
- Dig a ditch in order to dispose of extinguishing water and don't scatter the material.
- Move container from fire area if it can be done without risk.

6. Measures for Accidental Leakage

(a) Personal precautions, protective equipment and emergency procedures:

- Remove whole ignition source.
- Give attention to things and conditions to avoid.

(b) Environmental precautions and protective procedures:

- Prevent inflow to waterway, drain, cellar and closed place.
- Don't emit into the environment.

(c) Methods and materials for containment and cleaning up:

- After absorbing the spilt thing with inert material(i.e. Dried sand or soil), Put it in

chemical waste container.

7. Handling and storage

(a) Precautions for safe handling:

- Do not eat, drink and smoke in case of using this material.
- Be careful against high temperature.
- Prevent continuous or long-term skin contact.

(b) Conditions for safe storage (including any incompatibilities):

- Be careful damage for sharp material or any pollution.
- Do not store outdoor and away from direct sunlight, moisture.

8. Exposure controls & personal protection.

(a) Control parameters :

- Domestic regulations : None known
- Biological exposure limit values : None known

(b) Appropriate engineering controls: None known

(c) Personal protective equipment

- Respiratory protection: None known
- Eye protection: None known
- Hands protection: None known
- Body protection: None known

9. Physical and chemical properties

- (a) Appearance : Printed film with special patterns
- (b) Properties : Solid
- (c) Odor : Chemical solvent odor
- (d) pH : None known
- (e) Melting point/freezing point : None known
- (f) Initial boiling point and boiling range : None known
- (g) Evaporation rate : None known
- (h) Flammability : None known
- (i) Vapor pressure : None known
- (j) Solubility in water : Not applicable
- (k) Specific Gravity(water=1) : 1.20~1.43
- (l) Viscosity : None known

10. Stability and Reactivity

- (a) Chemical stability and the possibility of detrimental reaction
 - Stable at room temperature and normal pressure, toxic gas may occur when decomposed at high temperature.
 - A part of material may be burnt down but it doesn't ignite easily.
- (c) conditions to avoid : ignition source such as heat, spark, flame

11. Toxicological information

- (a) Information on the likely routes of exposure : None known

(b) Health hazards information

- Acute toxic, oral : None known
- Acute dermal toxicity : None known
- Acute inhalation toxicity : None known
- Skin corrosive/irritant : None known
- Serious eye damage/eye irritation : None known
- Respiratory sensitization : None known
- Skin sensitization : None known
- Reproductive toxicity : None known
- Aspiration hazard : None known

12. Influence to the environment

- (a) Ecotoxicity : None known
- (b) Persistency and resolvability : None known
- (c) Bioconcentration : None known
- (d) Soil mobility : None known
- (e) Other hazardous influence : None known

13. Disposal considerations

- (a) Disposal method : None known
- (b) Disposal precaution
 - Contents container should be disposed of in accordance with relevant regulations.

14. Transport Information

- (a) Classified regulations of ship transport of hazards and storage rules in *The Ships Safety Act* : None known
- (b) Cautions in conveyance : None known

15. Regulatory information

- (a) Industrial Safety and Health Act : Not applicable
- (b) Toxic Chemical Control Act : Not applicable
- (c) Dangerous Material Safety Control Act : Not applicable
- (d) Wastes Management Act : Not applicable
- (e) Other requirements in domestic and other countries : Not applicable

16. Other information

- (a) This MSDS has been issued by HANWHA L&C Corporation complied with the LAW of Industry Security and Health article 41. Also, this MSDS has been referred to data of Korean Occupational Safety & Health Care Agency and HANWHA L&C Corporation.
- (b) This MSDS has been issued only to help the purchasers, agencies or the third parties who's needed to handle the material with safety, therefore, there should be no regal and technical responsibility if it applies to the special purpose and using with the other materials, commercial application or expression.
- (c) Information of this MSDS may be changed in accordance with new knowledge and experiment.