

## Material Safety Data Sheet (MSDS)

Mega FU300 Polyurethane topcoat, Part B

Date of issue: 2011-10-10

### Section 1. Identification

Product name: Pu Topcoat Part B  
 Product code: Mega FU 300B  
 Manufacturer: Shanghai Mega coatings company limited.  
 address: No1515, Sicheng Road, Malu, Jiading District, Shanghai, 201801, P.R.China  
 FAX: 86-021-5915001  
 Call: 86-021-5910888  
 MSDS code: MSDS- Mega FU 300 B  
 Emergency call: Chemical incident of China: 0532-83889090; 0532-83889191

### Section 2. Composition/information on ingredients

Ingredient name	%	CAS No.
Diisocyanate Based Polyisocyanate	70-75	28182-81-2
Xylene	7-10	1330-20-7
PMA	7-10	25173-35-7
n-butyl acetate	5-8	123-86-4

**Classification of the substance or mixture** FLAMMABLE LIQUIDS – Category 1  
 SKIN CORROSION/IRRITATION – Category 2  
 SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) [Narcotic effects] –  
 Category 3

**Primary Routes of Entry:** Skin Contacts, Inhalation, Eye Contact

**Potential acute health effects:**

**Eye contact** Causes serious eye irritation.

**Inhalation** Can cause central nervous system (CNS) depression. May cause drowsiness or dizziness

**Skin contact** Causes skin irritation.  
 Can cause central nervous system (CNS) depression. Irritating to

**Ingestion** mouth, throat and stomach.

**Environment influence:**

Harmful to water plants and animals.

**Flammable:**

Extremely flammable liquid and vapour. Causes skin irritation. May cause drowsiness or dizziness

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### Section 3. First-aid measures

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<b>Eye contact</b>	Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Get medical attention
<b>Inhalation</b>	Remove victim to fresh air and keep at rest in a position comfortable for breathing. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention. If necessary, call a poison center or physician. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband. Wash out mouth with water. Remove dentures if any. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention. If necessary, call a poison center or physician. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.
<b>Ingestion</b>	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Continue to rinse for at least 10 minutes. Get medical attention. Wash clothing before reuse. Clean shoes thoroughly before reuse
<b>Skin contact</b>	

### Section 4. Fire-fighting measures

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<b>Suitable extinguishing media</b>	Use dry chemical, CO <sub>2</sub> , water spray (fog) or foam.
<b>Unsuitable extinguishing media</b>	Do not use water jet.

<b>Specific hazards arising from the chemical</b>	Extremely flammable liquid and vapour. In a fire or if heated, a pressure increase will occur and the container may burst, with the risk of a subsequent explosion. Runoff to sewer may create fire or explosion hazard.
<b>Hazardous thermal decomposition products</b>	Decomposition products may include the following materials: carbon dioxide carbon monoxide
<b>Special protective actions for fire-fighters</b>	Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. Move containers from fire area if this can be done without risk. Use water spray to keep fire-exposed containers cool.
<b>Special protective equipment for fire-fighters</b>	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

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## Section 5. Accidental release measures

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**For non-emergency personnel:** No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilt material. Shut off all ignition sources. No flares, smoking or flames in hazard area. Avoid breathing vapour or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.

**For emergency responders :** If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

**Environmental precautions:** Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

**Small spill:** Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Use spark-proof tools and explosion-proof equipment. Dispose of via a licensed waste disposal contractor.

**Large spill:** Stop leak if without risk. Move containers from spill area. Approach the release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see section 13). Use spark-proof tools and explosionproof equipment. Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilt product. Note: see section 1 for emergency contact information and section 13 for waste disposal.

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## Section 6. Handling and storage

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<b>Precautions for safe handling</b>	Put on appropriate personal protective equipment (see Section 8). Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. Do not ingest. Avoid contact with eyes, skin and clothing. Avoid breathing vapour or mist. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Do not enter storage areas and confined spaces unless adequately ventilated. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Store and use away from heat, sparks, open flame or any other ignition source. Use explosion-proof electrical (ventilating, lighting and material handling) equipment. Use only non-sparking tools. Take precautionary measures against electrostatic discharges. Empty containers retain product residue and can be hazardous. Do not reuse container.
<b>Conditions for safe storage, including any incompatibilities</b>	Store in accordance with local regulations. Store in a segregated and approved area. Store in original container protected from direct sunlight in a dry, cool and well ventilated area, away from incompatible materials (see section 10) and food and drink. Store locked up. Eliminate all ignition sources. Separate from oxidizing materials. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabelled containers. Use appropriate containment to avoid environmental contamination.

## Section 7. Exposure controls/personal protection

### Occupational exposure limits

n-butyl acetate	<b>GBZ-2 (China, 4/2007).</b> PC-STEL: 300 mg/m <sup>3</sup> 15 minute(s). PC-TWA: 200 mg/m <sup>3</sup> 8 hour(s).
ethyl acetate	<b>GBZ-2 (China, 4/2007).</b> PC-STEL: 100 mg/m <sup>3</sup> 15 minute(s). PC-TWA: 50 mg/m <sup>3</sup> 8 hour(s).
ethyl acetate	<b>GBZ-2 (China, 4/2007).</b> PC-STEL: 300 mg/m <sup>3</sup> 15 minute(s). PC-TWA: 200 mg/m <sup>3</sup> 8 hour(s).
ethylbenzene	<b>GBZ-2 (China, 4/2007).</b> PC-TWA: 100 mg/m <sup>3</sup> 8 hour(s). PC-STEL: 150 mg/m <sup>3</sup> 15 minute(s).
Diisocyanate Base polyisocyanate	<b>GBZ-2 (China, 4/2007). Skin sensitiser.</b> PC-TWA: 0,1 mg/m <sup>3</sup> 8 hour(s). PC-STEL: 0,2 mg/m <sup>3</sup> 15 minute(s).

<b>Recommended monitoring procedures</b>	<p>If this product contains ingredients with exposure limits, personal, workplace atmosphere or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment.</p>
<b>Appropriate engineering controls</b>	<p>Use only with adequate ventilation. Use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits. The engineering controls also need to keep gas, vapour or dust concentrations below any lower explosive limits. Use explosion-proof ventilation equipment.</p>
<b>Environmental exposure controls</b>	<p>Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.</p>
<b>Hygiene measures</b>	<p>Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location</p>
<b>Eye protection</b>	<p>Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts.</p>
<b>Skin protection</b>	
<b>Hand protection</b>	<p>Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary.</p>
<b>Body protection</b>	<p>Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.</p>
<b>Other skin protection</b>	<p>Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.</p>
<b>Respiratory protection</b>	<p>Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.</p>

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## Section 8. Physical and chemical properties

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<b>Appearance</b>	
<b>Physical state</b>	Liquid.
<b>Colour</b>	clear
<b>Odour</b>	Characteristic.
<b>Odour threshold</b>	Not available
<b>pH</b>	Not available
<b>Melting point</b>	Not available
<b>Boiling point</b>	Not available
<b>Flash point</b>	Closed cup: 23°C
<b>Burning time</b>	Not available.
<b>Burning rate</b>	Not available.
<b>Evaporation rate</b>	Not available.
<b>Flammability (solid, gas)</b>	Not available.
<b>Lower and upper explosive (flammable) limits</b>	Not available.
<b>Vapour pressure</b>	Not available.
<b>Vapour density</b>	Not available.
<b>Solubility</b>	Insoluble in the following materials: cold water and hot water.
<b>Partition coefficient: noctanol/ water</b>	Not available.
<b>Auto-ignition temperature</b>	Not available.
<b>Decomposition temperature</b>	Not available.
<b>SADT</b>	Not available.
<b>Viscosity</b>	Not available.

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## Section 9. Stability and reactivity

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<b>Reactivity</b>	No specific test data related to reactivity available for this product or its ingredients.
<b>Chemical stability</b>	The product is stable.
<b>Possibility of hazardous reactions</b>	Under normal conditions of storage and use, hazardous reactions will not occur.
<b>Conditions to avoid</b>	Avoid all possible sources of ignition (spark or flame). Do not pressurise, cut, weld, braze, solder, drill, grind or expose containers to heat or sources of ignition.
<b>Incompatible materials</b>	Reactive or incompatible with the following materials: oxidizing materials
<b>Hazardous decomposition products</b>	Under normal conditions of storage and use, hazardous decomposition products should not be produced

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## Section 10. Toxicological & Ecological information

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Information on toxicological effects			
Acute toxicity			
Product/ingredient name	species	time	result
n-butyl acetate	LC50	48 h	19 mg/l
	LC50	96h	18 mg/l
	LC50	96 h	100 mg/l
xylene	LC50	96 h	3.3mg/l
	LC50	96 h	8.2mg/l
	LC50	96h	8.6mg/l
	LC50	96 h	12mg/l
	LC50	96 h	13.3mg/l
	LC50	96 h	13.4mg/l
PMA	LC50	96 h	21.2mg/l
	LC50	48 h	9.6mg/l
	LC50	72 h	<1000mg/l


## Section 11. Disposal considerations

### Disposal methods

The generation of waste should be avoided or minimised wherever possible. Significant quantities of waste product residues should not be disposed of via the foul sewer but processed in a suitable effluent treatment plant. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Vapor from product residues may create a highly flammable or explosive atmosphere inside the container. Do not cut, weld or grind used containers unless they have been cleaned thoroughly internally. Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers.

## Section 12. Transport information

<b>International law:</b>	Environmentally hazardous substance, liquid, n. o. s.
<b>UN number:</b>	1263
<b>UN proper shipping name</b>	Paint

Transport hazard class(es)	 3
Packing group	II
Environmental hazards	No.
Special precautions for user	Not available.
ADR / RID	Tunnel restriction code: (D/E) Hazard identification number: 33 Special provisions: 640D
IMDG	<b>Emergency schedules (EmS)</b> F-E, S-E
14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code	Not available.

### Section 13. Other information

Key to abbreviations	<p>ADN/ADNR = European Provisions concerning the International Carriage of Dangerous Goods by Inland Waterway</p> <p>ADR = The European Agreement concerning the International Carriage of Dangerous Goods by Road</p> <p>ATE = Acute Toxicity Estimate</p> <p>BCF = Bioconcentration Factor</p> <p>GHS = Globally Harmonized System of Classification and Labelling of Chemicals</p> <p>IATA = International Air Transport Association</p> <p>IBC = Intermediate Bulk Container</p> <p>IMDG = International Maritime Dangerous Goods</p> <p>LogPow = logarithm of the octanol/water partition coefficient</p> <p>MARPOL 73/78 = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution)</p> <p>RID = The Regulations concerning the International Carriage of Dangerous Goods by Rail</p> <p>UN = United Nations</p>
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symbols:

	pungent		harmful to environment
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Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.