

MATERIAL SAFETY DATA SHEET

1. PRODUCT AND COMPANY IDENTIFICATION

Product name	: EPICON UNDERCOAT HS , BASE	Product No. 5306
Manufacutrer / Supplier	: TOA-Chugoku Paints Co.,Ltd	
	110 Moo 5 Wellgrow I.E. Bangna-Trad Rd. Km.36,	
	Bangsamak, Bangpokong Chachoengsao, 24180	
	Telephone no. 66 02 2602701-8 , 66 038 570498-9	Fax : 66 02 2602700 , 66 038 570500
In case of emergency	: Telephone no. 66 02 2602701-8 , 66 038 570501	
Material intended use	: Coating: Solvent (Refer to technical data sheet)	

2. HARZARDS IDENTIFICATION



3. COMPOSITION / INFORMATION ON INGREDIENTS

Thi	s product contains the f	ollowing hazar	dous ingredient	S
Ingredient name	CAS No.	EC No.	% by w.t	Risk phrases (*)
xylene	1330-20-7	215-535-7	75	R10, R20/21, R38
4-methylpentan-2-one	108-10-1	203-550-1	25	R11, R20, R36/37, R66

* This is % by w.t of hazardous ingredient only.

* The full texts of R phrases are shown in section 16

4. FIRST-AID MEASURES

<u>First-aid measures</u>	
General	: In all cases of doubt, or when symtoms persist, seek medical attention. Never give anything
	by mouth to an unconscious person.
Eye contact	: Check for and remove any contact lenses. Immediately flush eyes with running clean fresh
	water for at least 15 minutes, keeping the eyelids open and seek medical attention.
Skin contact	: Remove contaminated clothing and shoes. Wash skin throughly with soap and water or use
	recognised skin cleanser. Do not use solvents or thinners.
Inhalation	: Remove to fresh air. Keep patient warm and at rest. If not breathing, if breathing is irregular
	or if respiratory arrest occures, provide artificial respiration or oxygen by trained personnel.
	Give nothing by mouth. If unconscious, place in recovery position and seek medical advice.
Ingestion	: If accidentally swallow obtain immediate medical attention and show the container or label.
	Keep patient warm and at rest. Do not induce vomitting.



5. FIRE FIGHTING MEASURES

Extinguishing media	:	Recommended : alcohol-resistant foam, CO2, powders, water spray.
		Do not use - water jet.
Recommendation	:	Fire will produce dense black smoke. Exposure to decomposition products may cause a health
		hazard. Approprirate breathing apparatus may be required. Cool closed containers exposed to
		fire with water. Do not release runoff from fire to sewers or waterways.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions	: Remove sauces of ignition and ventilation the area, avoid breathing vapour or mist.
r ersonar precautions	Do not turn lights or unprotected electricalequipment on or off.
Spill	: Contain and absorb spillage with non-combustible material e.g. sand, earth, vermiculite.
	Place in closed container outside building and disposal according to local regulation.
	Preferably clean with a detergent. Do not use solvents.
	Do not allow spills to enter drains or watercauses.
	If drain, lakes, river, or sewers are contimated , inform the appropriateauthorities in
	accordance with local regulations.
Note : see section 8 for	personal protective equipment and section 13 for waste disposal.

7. HANDLING AND STORAGE

Handling	: This coating contains solvents. Solvent vapours are heavier than air and may spread along floors. vapours may form explosive mixtures with air. Areas of storage, preparation and application should be ventilated to prevent the creation of flammable or explosive concentrations of vapour in air and avoid vapour concentrations higher than the occupational exposure limits.
In storage	: Handle containers carefully to prevent damage and spillage. Naked flames and smoking should not be permitted in storage areas. It is recommended that fork lift trucks and electrical equipment are protected to the appropriate standard.
In use	: Avoid skin and eye contact. Avoid inhalation of vapours and spray mists. Observe label precaution. Put on appropriate personal protective equipment. Smoking, eating and drinking should be prohibited in areas where this material is handled.
	Never use pressure to empty. Container is not a pressure vessel. Always keep in containers made from the same material as the original one.
	The product may charge electrostatically. Always use earthing leads when pouring solvents and transferring product. Operators should wear clothing which does not generate static and antistatic footwear; floor should be conductive type.
	When operators, whether spraying or not, have to work inside the spray booth, ventilation is unlikely to be sufficient to control particulates and solvent vapour in all case. In such circumstances they should wear a compressed air-fed respirator during the spraying process and until such time as the particulates and solvent vapour concentration has fallen below the exposure limits.
Storage	; Store in accordance with local regulation. Observe label precautions. Store in a cool, well ventilated area away from incompatible materials and sauce of heat and direct sunlight.
	Keep away from ; oxidising agent, strong alkalis, strong acids.



Storage	Store on concrete or other impervious floor, preferably with bunding to contain any spillage.
	Do not stack more than 3 pallets high.
	Keep container tightly closed. Container that have been opened must be carefully resealed and
	kept upright to prevent leakage.
	Prevent unauthorised access.
	This is highly flammable liquid. Refer to the requirements of local regulations for the storage
	and handling regulations petaining to this material.

8. EXPOSURE CONTROL / PERSONAL PROTECTION

Engineering measures	:	Provide adequate ventilation. Where resonably practicable, this should be achived by the use of
		local exhaust ventilation and good general extraction. If these are not sufficient to maintain
		concentrations of particulates and solvent vapours below the occupational exposure limits (OEL)
		suitable respirator must be worn.
n r r		

Exposure Limits

Exposure standards are those provided by the ACGIH (American Conference of Government Industrial Hygenists).

<u>Material</u>	STEL-15 min.ave	Long term-TWA-8hr	
xylene	150 ppm	100 ppm	
4-methylpentan-2-one	300 ppm	200 ppm	

Personal protection equi	ipment
Respiratory Protection	 Use a properly fitted, air-purifying or air-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. When concentrations exceed the exposure limits shown above, worker must wear appropriate respirators. Provision of other control such as exhaust ventilation should be considered if practical.
Eye Protection	 Wear safety eyeware, e.g. safety spectacles, goggle or visors to protect against the splash of liquids. Eyeware should comply with an approved standard. Wear a full face shield if mixing or pouring operations pose a risk of splashes. An eyewash station is suggested as a good work place practice.
Hands Protection	 Gloves of an appropriate material should worn during mixing and application. For prolonged or repeated handling, use the following type of gloves: gloves; nitrile. Barrier creams may help to protect the exposed areas of the skin but should not be applied once exposure has occurred. For right choice of glove materials, with focus on chemical resistance and time of penetration, seek advice by the supplier of chemical resistant gloves.
Skin Protection	: Overalls which cover the body, arms and legs should worn. Skinshould not be exposed. Barrier creams may help to protect areas which are difficult to cover such as face and neck. They should howerve not be applied once ecposure has occurred. Petroleum jelly based types Such as vaseline should not be used. All part of the body should be washed after contact.



9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state : () Solid (x) Liquid	Odour : Smell of solvent Density : 1.61 g/cm ³
() Paste () Powder	Colour : Various Flash point : 23 °C
Solubility : Insoluble in water	Explosion limits : LEL% 1.2 UEL% 12.3
Vapour pressure : 1940 Pa, 20 °C	Autoignition temperature : 432 °C

10. STABILITY AND REACTIVITY

Stable under recommended storage and handling conditions (see section 8). When exposed to high teemperatures may produce hazardous decomposition products such as carbon monoxide, carbon dioxide, oxide of nitrogen ans smkoe.

Keep away from oxidising agents, strongly alkaline and strong acid materials in order to avoid possible exothermic reactions.

11. TOXICOLOGICAL INFORMATION

There are no data available on the product itself.

Exposure to solvent vapour concentration from the component solvents in excess of the state occupational exposure limits may result in adverse health effects such as mucous and membrane and respiratory system irritation and adverse effects on the kidneys, liver and central nervous system. Symptoms include headache, nausea, dizziness, fatigue, muscular weakness, downsiness andin extream cases, loss of consciousness.

Repeated or prolonged contact with the preparation may cause removal of natural fat from the skin resulting in dryness, irritation and possible non-allergic contact dermatitis. Solvents may also be absorbed through the skin. Splashes of liquid in the eye may cause irritation and soreness with possible reversibledamage.

12. ECOLOGICAL INFORMATION

There is no data available on the preparation itself.				
Do not allow to enter drains or wate	rcourses.			
Material	Oral LD50	Skin LD50	Inhalation LC50	
Wateria	(mg/kg)	(mg/kg)	mg/l/4hr	
xylene	>2000 rat	>2000 rabbit	5000 ppm rat	
4-methylpentan-2-one	>2000 rat	>2000 rabbit	>20 rat	

13. DISPOSAL CONSIDERATION

Method of disposal	:	Do not allow into drain or water courses. Wastes and empty containers should be disposal
		of in accordance with regulations made under the Control of Pollution Act and the
		Environmental Protection Act.
		Using information provided in this data sheet advice should be obtained from the Waste
		Regulation Authority, whether the special waste regulations apply.

14. TRANSPORT INFORMATION

Transport within user's pr	emises:	always transport in closed conta	iners that are upright and secure. Ensure that persons transporting the
product know what to do	in the e	vent of an accident or spillage.	
International transport re	gulation	<u>s</u>	
Proper shipping name	:	Paint	
UN number	:	1263	
Class	:	3	
Packing group	:	III	
Label	:	PLANMABLE LIQUID	
Additional information		•	
IMDG	:	Class	: 3
		Proper shipping name	: Paint
		Emergency schedules (EmS)	: F-E, S-E
		Marine pollutant	: No
		Packing group	: III
ICAO/IATA	:	Proper shipping name	: Paint
	:	UN number	: 1263
		Class	: 3
		Packing group	: III

The product complies with these local regulations.

16. OTHER INFORMATION

CEPE Classification	:	1	
Full text of R-pharses	:	R10	Flammable
		R11	Highly flammable.
		R20	Harmful by inhalation.
		R20/21	Harmful by inhalation and in contact with skin.
		R36/37	Ware suitable protective clothing and gloves.
		R38	Irritaing to skin.
		R66	Repeated exposure may cause skin dryness or cracking.

The information on this safety data sheet is based upon the present state of our knowledge and on current law. The product should not be used for purposes other than shown in the product data sheet without first obtaining written advice.

It is always the responsibility of the user to take all necessary steps to meet the demands of applicable legislation.

The information in this Material Safety Data Sheet is required according to legislation.



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Manufacutrer / Supplier	: TOA-Chugoku Paints Co.,Ltd	
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	Bangsamak, Bangpokong Chachoengsao, 24180	
	Telephone no. 66 02 2602701-8 , 66 038 570498-9	Fax : 66 02 2602700 , 66 038 570500
In case of emergency	: Telephone no. 66 02 2602701-8 , 66 038 570501	
Material intended use	: Coating: Solvent (Refer to technical data sheet)	

2. HARZARDS IDENTIFICATION



3. COMPOSITION / INFORMATION ON INGREDIENTS

This product contains the following hazardous ingredients				
Ingredient name	CAS No.	EC No.	% by w.t	Risk phrases (*)
xylene	1330-20-7	215-535-7	99	R10, R20/21, R38
triethylenetetramine	112-24-3	203-950-6	1	R21, R34, R43, R52/53

* This is % by w.t of hazardous ingredient only.

* The full texts of R phrases are shown in section 16

4. FIRST-AID MEASURES

<u>First-aid measures</u>	
General	: In all cases of doubt, or when symtoms persist, seek medical attention. Never give anything
	by mouth to an unconscious person.
Eye contact	: Check for and remove any contact lenses. Immediately flush eyes with running clean fresh
	water for at least 15 minutes, keeping the eyelids open and seek medical attention.
Skin contact	: Remove contaminated clothing and shoes. Wash skin throughly with soap and water or use
	recognised skin cleanser. Do not use solvents or thinners.
Inhalation	: Remove to fresh air. Keep patient warm and at rest. If not breathing, if breathing is irregular
	or if respiratory arrest occures, provide artificial respiration or oxygen by trained personnel.
	Give nothing by mouth. If unconscious, place in recovery position and seek medical advice.
Ingestion	: If accidentally swallow obtain immediate medical attention and show the container or label.
	Keep patient warm and at rest. Do not induce vomitting.



5. FIRE FIGHTING MEASURES

Extinguishing media	:	Recommended : alcohol-resistant foam, CO2, powders, water spray.
		Do not use - water jet.
Recommendation	:	Fire will produce dense black smoke. Exposure to decomposition products may cause a health
		hazard. Approprirate breathing apparatus may be required. Cool closed containers exposed to
		fire with water. Do not release runoff from fire to sewers or waterways.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions	: Remove sauces of ignition and ventilation the area, avoid breathing vapour or mist.
r ersonar precautions	Do not turn lights or unprotected electricalequipment on or off.
Spill	: Contain and absorb spillage with non-combustible material e.g. sand, earth, vermiculite.
	Place in closed container outside building and disposal according to local regulation.
	Preferably clean with a detergent. Do not use solvents.
	Do not allow spills to enter drains or watercauses.
	If drain, lakes, river, or sewers are contimated , inform the appropriateauthorities in
	accordance with local regulations.
Note : see section 8 for	personal protective equipment and section 13 for waste disposal.

7. HANDLING AND STORAGE

Handling	: This coating contains solvents. Solvent vapours are heavier than air and may spread along floors. vapours may form explosive mixtures with air. Areas of storage, preparation and application should be ventilated to prevent the creation of flammable or explosive concentrations of vapour in air and avoid vapour concentrations higher than the occupational exposure limits.
In storage	: Handle containers carefully to prevent damage and spillage. Naked flames and smoking should not be permitted in storage areas. It is recommended that fork lift trucks and electrical equipment are protected to the appropriate standard.
In use	: Avoid skin and eye contact. Avoid inhalation of vapours and spray mists. Observe label precaution. Put on appropriate personal protective equipment. Smoking, eating and drinking should be prohibited in areas where this material is handled.
	Never use pressure to empty. Container is not a pressure vessel. Always keep in containers made from the same material as the original one.
	The product may charge electrostatically. Always use earthing leads when pouring solvents and transferring product. Operators should wear clothing which does not generate static and antistatic footwear; floor should be conductive type.
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Storage	; Store in accordance with local regulation. Observe label precautions. Store in a cool, well ventilated area away from incompatible materials and sauce of heat and direct sunlight.
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Storage	Store on concrete or other impervious floor, preferably with bunding to contain any spillage.
	Do not stack more than 3 pallets high.
	Keep container tightly closed. Container that have been opened must be carefully resealed and
	kept upright to prevent leakage.
	Prevent unauthorised access.
	This is highly flammable liquid. Refer to the requirements of local regulations for the storage
	and handling regulations petaining to this material.

8. EXPOSURE CONTROL / PERSONAL PROTECTION

Engineering measures	: Provide adequate ventilation. Where resonably practicable, this should be achived by the use of
	local exhaust ventilation and good general extraction. If these are not sufficient to maintain
	concentrations of particulates and solvent vapours below the occupational exposure limits (OE
	suitable respirator must be worn.
Exposure Limits	
-	ose provided by the ACGIH (American Conference of Government Industrial Hygenists).
<u>Material</u>	STEL-15 min.ave Long term-TWA-8hr
xylene	150 ppm 100 ppm
Personal protection equi	ment
Respiratory Protection	: Use a properly fitted, air-purifying or air-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.
	When concentrations exceed the exposure limits shown above, worker must wear appropriate
	respirators. Provision of other control such as exhaust ventilation should be considered
	if practical.
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	Wear a full face shield if mixing or pouring operations pose a risk of splashes.
	An eyewash station is suggested as a good work place practice.
Hands Protection	: Gloves of an appropriate material should worn during mixing and application.
	For prolonged or repeated handling, use the following type of gloves: gloves; nitrile.
	Barrier creams may help to protect the exposed areas of the skin but should not be applied once exposure has occurred.
	For right choice of glove materials, with focus on chemical resistance and time of penetration,
	seek advice by the supplier of chemical resistant gloves.
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	Barrier creams may help to protect areas which are difficult to cover such as face and neck.
	They should howerve not be applied once ecposure has occurred. Petroleum jelly based types
	Such as vaseline should not be used. All part of the body should be washed after contact.



9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state : () Solid (x) Liquid	Odour : Smell of solvent Density : 0.96 g/cm ³
() Paste () Powder	Colour : Yellowish Clear Flash point : 27 °C
Solubility : Insoluble in water	Explosion limits : LEL% 1.9 UEL% 12.3
Vapour pressure : 1000 Pa, 20 °C	Autoignition temperature : 432 °C

10. STABILITY AND REACTIVITY

Stable under recommended storage and handling conditions (see section 8). When exposed to high teemperatures may produce hazardous decomposition products such as carbon monoxide, carbon dioxide, oxide of nitrogen ans smkoe.

Keep away from oxidising agents, strongly alkaline and strong acid materials in order to avoid possible exothermic reactions.

11. TOXICOLOGICAL INFORMATION

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12. ECOLOGICAL INFORMATION

Do not allow to enter drains or v Material	Oral LD50	Skin LD50	Inhalation LC50
	(mg/kg)	(mg/kg)	mg/l/4hr
xylene	>2000 rat	>2000 rabbit	5000 ppm rat

Method of disposal	:	Do not allow into drain or water courses. Wastes and empty containers should be disposal
		of in accordance with regulations made under the Control of Pollution Act and the
		Environmental Protection Act.
		Using information provided in this data sheet advice should be obtained from the Waste
		Regulation Authority, whether the special waste regulations apply.



14. TRANSPORT INFORMATION

Transport within user's pr	emises: a	lways transport in closed conta	iners that are upright and secure. Ensure that persons transporting the	
product know what to do	in the ev	ent of an accident or spillage.		
International transport re	gulations	_		
Proper shipping name	:	Paint		
UN number	:	1263		
Class	:	3		
Packing group	:	III		
Label	:	PLAMMABLE LIQUID		
Additional information				
IMDG	:	Class	: 3	
		Proper shipping name	: Paint	
		Emergency schedules (EmS)	: F-E, S-E	
		Marine pollutant	: No	
		Packing group	: III	
ICAO/IATA	:	Proper shipping name	: Paint	
	:	UN number	: 1263	
		Class	: 3	
		Packing group	: III	
15. REGULATORY INFO	RMATIC	N		
The product complies with these local regulations.				

16. OTHER INFORMATION

CEPE Classification	:	1	
Full text of R-pharses	:	R10	Flammable
		R20/21	Harmful by inhalation and in contact with skin.
		R38	Irritaing to skin.

The information on this safety data sheet is based upon the present state of our knowledge and on current law.

The product should not be used for purposes other than shown in the product data sheet without first obtaining written advice.

It is always the responsibility of the user to take all necessary steps to meet the demands of applicable legislation.

The information in this Material Safety Data Sheet is required according to legislation.