

Futura Classic Comp B

Section 1. Identification	
Product name	: Futura Classic Comp B
Product code	: 18640
Product description	: Hardener.
Product type	: Liquid.
Other means of identification	: Not available.

Relevant identified uses of the substance or mixture and uses advised against

Use in coatings - Industrial use Use in coatings - Professional use

Supplier's details :	Jotun UAE Ltd. L.L.C. P.O.Box 3671, Dubai, U.A.E. Tel: 009714 3395000 Fax:009714 3380666
	Jotun Abu Dhabi L.L.C. P.O.box-3714 Abu Dhabi U.A.E. Tel: 00971 2 5510300 Fax:00971 2 5510232
	SDSJotun@jotun.com
Emergency telephone : number	Jotun AS, Norway +47 33 45 70 00

Section 2. Hazards identification

Classification of the substance or mixture	: FLAMMABLE LIQUIDS - Category 3 ACUTE TOXICITY (inhalation) - Category 4 SKIN CORROSION/IRRITATION - Category 3 SKIN SENSITISATION - Category 1 SPECIFIC TARGET ORGAN TOXICITY - SINGLE EXPOSURE (Respiratory tract irritation) - Category 3
GHS label elements	
Hazard pictograms	
Signal word	: Warning.
Hazard statements	: H226 - Flammable liquid and vapour. H316 - Causes mild skin irritation. H317 - May cause an allergic skin reaction. H332 - Harmful if inhaled. H335 - May cause respiratory irritation.
Precautionary statements	

Section 2. Hazards identification

Prevention	 P280 - Wear protective gloves. P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. P261 - Avoid breathing vapour.
Response	 P304 + P312 - IF INHALED: Call a POISON CENTER or doctor if you feel unwell. P362 + P364 - Take off contaminated clothing and wash it before reuse. P302 + P352 - IF ON SKIN: Wash with plenty of water. P333 + P313 - If skin irritation or rash occurs: Get medical advice or attention.
Storage	: P403 + P233 - Store in a well-ventilated place. Keep container tightly closed.
Disposal	: P501 - Dispose of contents and container in accordance with all local, regional, national and international regulations.

Other hazards which do not : None known. result in classification

Section 3. Composition/information on ingredients

Substance/mixture	:	Mixture
Other means of	:	Not available.
identification		

CAS number/other ide	ntifiers		
CAS number	: Not applicable.		
EC number	: Mixture.		
Product code	: 18640		
Ingredient name		%	CAS number
Hexamethylene diisocy	anate, oligomers	≥50 - ≤75	28182-81-2
2-methoxy-1-methyleth	yl acetate	≥10 - <20	108-65-6
xylene	-	<10	1330-20-7
ethylbenzene		≤5	100-41-4

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

Occupational exposure limits, if available, are listed in Section 8.

Section 4. First aid measures

Description of necessary first aid measures

Eye contact	: 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. If irritation persists, get medical attention.
Inhalation	: 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. In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.
Skin contact	: Wash with plenty of soap and water. Remove contaminated clothing and shoes. Wash contaminated clothing thoroughly with water before removing it, or wear gloves. Continue to rinse for at least 10 minutes. Get medical attention. In the event of any complaints or symptoms, avoid further exposure. Wash clothing before reuse. Clean shoes thoroughly before reuse.

Section 4. First aid measures

Incretion	Mash sut mouth with water. Demous dentures if any off material has have		
Ingestion	: Wash out mouth with water. Remove dentures if any. 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 adverse health effects persist or are severe. 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.		
Most important symptoms/e	effects, acute and delayed		
Potential acute health effe	<u>cts</u>		
Eye contact	: No known significant effects or critical hazards.		
Inhalation	: Harmful if inhaled. May cause respiratory irritation.		
Skin contact	: Causes mild skin irritation. May cause an allergic skin reaction.		
Ingestion	: No known significant effects or critical hazards.		
Over-exposure signs/symp	<u>otoms</u>		
Eye contact	: Adverse symptoms may include the following: pain or irritation watering redness		
Inhalation	: Adverse symptoms may include the following: respiratory tract irritation coughing		
Skin contact	: Adverse symptoms may include the following: irritation redness		
Ingestion	: No specific data.		
Indication of immediate me	dical attention and special treatment needed, if necessary		
Notes to physician	: In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.		
Specific treatments	: No specific treatment.		
Protection of first-aiders	: No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wash contaminated clothing thoroughly with water before removing it, or wear gloves.		

See toxicological information (Section 11)

Section 5. Firefighting measures

Extinguishing media	
Suitable extinguishing media	: Use dry chemical, CO ₂ , water spray (fog) or foam.
Unsuitable extinguishing media	: Do not use water jet.
Specific hazards arising from the chemical	: Flammable liquid and vapour. Runoff to sewer may create fire or explosion hazard. In a fire or if heated, a pressure increase will occur and the container may burst, with the risk of a subsequent explosion.
Hazardous thermal decomposition products	: Decomposition products may include the following materials: carbon dioxide carbon monoxide nitrogen oxides
Date of issue/Date of revision	: 08.05.2023 Date of previous issue : 08.05.2023 Version : 2.01 3/11

Section 5. Firefighting measures

Special protective actions for fire-fighters		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.
Special protective equipment for fire-fighters	:	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

Section 6. Accidental release measures

Personal precautions, protec	tiv	<u>e equipment and emergency procedures</u>
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).
Methods and material for cor	ntai	inment and cleaning up
Small spill	:	Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. 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. Dispose of via a licensed waste disposal contractor.
Large spill	:	Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. 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). Dispose of via a licensed waste disposal contractor. Contaminated absorbent

Section 7. Handling and storage

Precautions for safe handling

Protective measures
 Put on appropriate personal protective equipment (see Section 8). Persons with a history of skin sensitization problems should not be employed in any process in which this product is used. Do not get in eyes or on skin or clothing. Do not ingest. 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.

material may pose the same hazard as the spilt product. Note: see Section 1 for

emergency contact information and Section 13 for waste disposal.

Control parameters

Section 7. Handling and storage

Advice on general occupational hygiene	: 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. See also Section 8 for additional information on hygiene measures.
Conditions for safe storage, including any incompatibilities	: 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 oxidising 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. See Section 10 for incompatible materials before handling or use.

Section 8. Exposure controls/personal protection

oontroi parameters	
Occupational exposure lin	<u>nits</u>
None.	
Appropriate engineering controls	: 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.
Environmental exposure controls	: 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.
Individual protection measure	ures
Hygiene measures	: 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. Contaminated work clothing should not be allowed out of the workplace. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.
Eye/face protection	: Safety eyewear complying to ISO 16321-1:2022 should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: chemical splash goggles.
Skin protection	
Hand protection	 There is no one glove material or combination of materials that will give unlimited resistance to any individual or combination of chemicals. The breakthrough time must be greater than the end use time of the product. The instructions and information provided by the glove manufacturer on use, storage, maintenance and replacement must be followed. Gloves should be replaced regularly and if there is any sign of damage to the glove material. Always ensure that gloves are free from defects and that they are stored and used correctly. The performance or effectiveness of the glove may be reduced by physical/chemical damage and poor maintenance. Barrier creams may help to protect the exposed areas of the skin but should not be applied once exposure has occurred.

Section 8. Exposure controls/personal protection

	Wear suitable gloves tested to ISO 374-1:2016. Not recommended, gloves(breakthrough time) < 1 hour: neoprene (> 0.35 mm) May be used, gloves(breakthrough time) 4 - 8 hours: butyl rubber (> 0.4 mm), PVC (> 0.5 mm) Recommended, gloves(breakthrough time) > 8 hours: Viton® (> 0.7 mm), nitrile rubber (> 0.4 mm), 4H/Silver Shield® (> 0.07 mm), Teflon (> 0.35 mm), polyvinyl alcohol (PVA) (> 0.3 mm)
Body protection	: 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. When there is a risk of ignition from static electricity, wear anti-static protective clothing. For the greatest protection from static discharges, clothing should include anti-static overalls, boots and gloves.
Other skin protection	 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.
Respiratory protection	: Self-contained respiratory equipment must be worn by spray operator, even when good ventilation is provided. By other operations than spraying, in well ventilated areas, air-fed respirators could be replaced by a combination charcoal filter and particulate filter mask.

Section 9. Physical and chemical properties

Appearance		
Physical state	_iquid.	
Colour	Clear.	
Odour	Characteristic.	
Odour threshold	Not applicable.	
рН	Not applicable.	
Melting point	Not applicable.	
Boiling point	Lowest known value: 136.1°C (277°F) (ethylbenzene). Weighted average: 1 (285.7°F)	140.97°C
Flash point	Closed cup: 38°C (100.4°F)	
Evaporation rate	Highest known value: 0.84 (ethylbenzene) Weighted average: 0.54compar- outyl acetate	ed with
Flammability (solid, gas)	Not applicable.	
Lower and upper explosive (flammable) limits	0.8 - 7%	
Vapour pressure	Highest known value: 1.2 kPa (9.3 mm Hg) (at 20°C) (ethylbenzene). Weig average: 0.17 kPa (1.28 mm Hg) (at 20°C)	Jhted
Vapour density	Highest known value: 4.6 (Air = 1) (2-methoxy-1-methylethyl acetate). We average: 4.15 (Air = 1)	ighted
Density	1.07 g/cm ³	
Solubility	nsoluble in the following materials: cold water and hot water.	
Partition coefficient: n- octanol/water	Not available.	
Auto-ignition temperature	_owest known value: 333°C (631.4°F) (2-methoxy-1-methylethyl acetate).	
Decomposition temperature	Not available.	
Viscosity	Kinematic (40°C): >20.5 mm²/s (>20.5 cSt)	

Section 10. Stability and reactivity

Reactivity	: No specific test data related to reactivity available for this product or its ingredients.
Chemical stability	: The product is stable.
Possibility of hazardous reactions	: Under normal conditions of storage and use, hazardous reactions will not occur.
Conditions to avoid	: 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.
Incompatible materials	: Reactive or incompatible with the following materials: oxidising materials
Hazardous decomposition products	: Under normal conditions of storage and use, hazardous decomposition products should not be produced.

Section 11. Toxicological information

Information on toxicological effects

Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
2-methoxy-1-methylethyl acetate	LD50 Dermal	Rabbit	>5 g/kg	-
xylene	LD50 Oral LC50 Inhalation Vapour	Rat Rat	8532 mg/kg 20 mg/l	- 4 hours
,	LD50 Oral TDLo Dermal	Rat Rabbit	4300 mg/kg 4300 mg/kg	-
ethylbenzene	LC50 Inhalation Vapour LD50 Dermal LD50 Oral	Rat - Male Rabbit Rat	17.8 mg/l >5000 mg/kg 3500 mg/kg	4 hours - -

Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation
Hexamethylene diisocyanate, oligomers	Eyes - Moderate irritant	Rabbit	-	100 mg	-
	Skin - Moderate irritant	Rabbit Rabbit	-	500 mg 87 milligrams	-
xylene	Eyes - Mild irritant Skin - Mild irritant	Rat		8 hours 60 microliters	-

Sensitisation

• •	Route of exposure	Species	Result
Hexamethylene diisocyanate, oligomers	skin	Mammal - species unspecified	Sensitising

Mutagenicity

Not available.

Carcinogenicity

Not available.

Reproductive toxicity

Not available.

Teratogenicity

Not available.

Specific target organ toxicity (single exposure)

Section 11. Toxicological information

Name	Category	Route of exposure	Target organs
Hexamethylene diisocyanate, oligomers	Category 3	-	Respiratory tract irritation
2-methoxy-1-methylethyl acetate	Category 3	-	Narcotic effects
xylene	Category 3	-	Respiratory tract irritation

Specific target organ toxicity (repeated exposure)

Name		Route of exposure	Target organs
ethylbenzene	Category 2	-	hearing organs

Aspiration hazard

Name	Result	
	ASPIRATION HAZARD - Category 1 ASPIRATION HAZARD - Category 1	

Information on likely routes : Not available. of exposure

Potential acute health effects		
Eye contact	1	No known significant effects or critical hazards.
Inhalation	1	Harmful if inhaled. May cause respiratory irritation.
Skin contact	1	Causes mild skin irritation. May cause an allergic skin reaction.
Ingestion	:	No known significant effects or critical hazards.

Symptoms related to the physical, chemical and toxicological characteristics

Eye contact	: Adverse symptoms may include the following: pain or irritation watering redness
Inhalation	: Adverse symptoms may include the following: respiratory tract irritation coughing
Skin contact	: Adverse symptoms may include the following: irritation redness
Ingestion	: No specific data.

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Short term exposure		
Potential immediate effects	:	Not available.
Potential delayed effects	:	Not available.
<u>Long term exposure</u>		
Potential immediate effects	:	Not available.
Potential delayed effects	:	Not available.
Potential chronic health eff	ect	<u>s</u>
Not available.		
General	:	Once sensitized, a severe allergic reaction may occur when subsequently exposed to very low levels.
Carcinogenicity	:	No known significant effects or critical hazards.
Date of issue/Date of revision		: 08.05.2023 Date of previous issue : 08.05.2023 Version : 2.01 8/11

Section 11. Toxicological information

Mutagenicity	: No known significant effects or critical hazards.
Teratogenicity	: No known significant effects or critical hazards.
Developmental effects	: No known significant effects or critical hazards.
Fertility effects	: No known significant effects or critical hazards.

Numerical measures of toxicity

Acute toxicity estimates

Route	ATE value
Dermal	11733.33 mg/kg
Inhalation (vapours)	155.2 mg/l
Inhalation (dusts and mists)	2.01 mg/l

Section 12. Ecological information

Toxicity

Product/ingredient name	Result	Species	Exposure
xylene	Acute LC50 8500 µg/l Marine water	Crustaceans - Palaemonetes pugio	48 hours
ethylbenzene	Acute LC50 13400 μg/l Fresh water Acute EC50 7700 μg/l Marine water Acute EC50 2.93 mg/l Acute LC50 4.2 mg/l	, Fish - Pimephales promelas Algae - Skeletonema costatum Daphnia Fish	96 hours 96 hours 48 hours 96 hours

Persistence and degradability

Product/ingredient name	Aquatic half-life	Photolysis	Biodegradability
xylene ethylbenzene	-		Readily Readily

Bioaccumulative potential

Product/ingredient name	LogPow	BCF	Potential
Hexamethylene diisocyanate, oligomers	5.54	367.7	low
2-methoxy-1-methylethyl acetate	1.2	-	low
xylene ethylbenzene	3.12 3.6	8.1 to 25.9 -	low low

Mobility in soil

: Not available.

Other adverse effects

Soil/water partition

coefficient (Koc)

: No known significant effects or critical hazards.

Section 13. Disposal considerations

Disposal methods : The generation of waste should be avoided or minimised wherever possible. 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. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill

Section 13. Disposal considerations

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. Vapour 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 14. Transport information

	ADR/RID	IMDG	ΙΑΤΑ
UN number	UN1866	UN1866	UN1866
UN proper shipping name	Resin solution	Resin solution	Resin solution
Transport hazard class(es)	3	3	3
Packing group	Ш	III	
Environmental hazards	No.	No.	No.
Additional information	-	Emergency schedules F-E, S-E	-

Additional information		
ADR/RID	:	ADR/RID: Viscous substance. Not restricted, ref. chapter 2.2.3.1.5 (applicable to receptacles < 450 litre capacity).
		<u>Hazard identification number</u> 30 <u>Tunnel code</u> (D/E)
IMDG	:	IMDG: Viscous substance. Transport in accordance with paragraph 2.3.2.5 (applicable to receptacles < 450 litre capacity).
		Emergency schedules F-E, <u>S-E</u>
Special precautions for user	:	Transport within user's premises: always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.
Transport in bulk according	:	Not available.

to IMO instruments

Section 15. Regulatory information

Safety, health and	1	No known specific national and/or regional regulations applicable to this product
environmental regulations		(including its ingredients).
specific for the product		

International regulations

Chemical Weapon Convention List Schedules I, II & III Chemicals

Not listed.

Montreal Protocol

Not listed.

Stockholm Convention on Persistent Organic Pollutants

Section 15. Regulatory information

Not listed.

UNECE Aarhus Protocol on POPs and Heavy Metals

Not listed.

Section 16. Other information

<u>History</u>	
Date of printing	: 08.05.2023
Date of issue/Date of revision	: 08.05.2023
Date of previous issue	: 08.05.2023
Version	: 2.01
Key to abbreviations	 ATE = Acute Toxicity Estimate BCF = Bioconcentration Factor GHS = Globally Harmonized System of Classification and Labelling of Chemicals IATA = International Air Transport Association IBC = Internediate Bulk Container IMDG = International Maritime Dangerous Goods LogPow = logarithm of the octanol/water partition coefficient MARPOL = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution) UN = United Nations
References	: Not available.

✓ Indicates information that has changed from previously issued version.

Notice to reader

The information in this document is given to the best of Jotun's knowledge, based on laboratory testing and practical experience. Jotun's products are considered as semi-finished goods and as such, products are often used under conditions beyond Jotun's control. Jotun cannot guarantee anything but the quality of the product itself. Minor product variations may be implemented in order to comply with local requirements. Jotun reserves the right to change the given data without further notice.

Users should always consult Jotun for specific guidance on the general suitability of this product for their needs and specific application practices.

If there is any inconsistency between different language issues of this document, the English (United Kingdom) version will prevail.