SAFETY DATA SHEET (SDS)
WANNATE HB-75MX

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SECTION 1 Identification of the substance/mixture and of the company/undertaking

1.1. **Product identifier**

Substance name:	**MIXTURE OF HEXAMETHYLENE DIISOCYANATE, OLIGOMERS AND SOLVENTS**
Product name:	**WANNATE HB-75MX**
Index No:	Not applicable.
EC number:	Not applicable.
CAS number:	Not applicable.
UFI:	ECS0-20Q7-U00G-X3JQ
REACH Registration number:	This product is a mixture and therefore is not registered under REACH Regulation.

Type of substance:
Composition: mixture
Origin: organic

1.2 **Relevant identified uses of the substance or mixture and uses advised against**
Binding agents, intermediates; other: isocyanate component for polyurethanes.
The highly reactive diisocyanates are important materials used in production of PUR products. Their reaction with various polyols and auxiliary materials is utilized to obtain miscellaneous material structures like foams, coatings or adhesives.
Uses advised against: Do not use for private purposes (household).

1.3. **Details of the supplier of the safety data sheet**

Company identification:
Wanhua Chemical (Singapore) Pte.Ltd.
50 Raffles Place#33-06, Singapore Land Tower
48623 Singapore
Phone: +65 62240614; +65 62240615
Other comments: Language(s) of the phone service: Chinese, English.

Only representative:
BorsodChem Zrt.
H-3700 Kazincbarcika
Bolyai tér 1
Hungary
Phone: +36 48 511 211 (0-24 h)
Other comments: Language(s) of the phone service: Hungarian, English.
E-mail of responsible person for SDS: wanhuareach@borsodchem.eu

1.4. **Emergency telephone number**

SGS Emergency Response Services
Phone: +32 3 575 55 55 (International, 0-24 h)
Other comments: Language(s) of the phone service: English.

Phone: +86 535-8203123 (Wanhua); +86 532-83889090 (China)
Other comments: Language(s) of the phone service: Chinese, English.

National Poisons Information Service (England, Wales)
Phone: 111 (0-24 h)

SECTION 2 Hazards identification

2.1. **Classification of the substance or mixture**
2.1.1. **Classification according to 1272/2008/EC**

Hazard classes/categories	Hazard statement
Acute Tox. 4	**H332** Harmful if inhaled.
Skin Sens. 1	**H317** May cause an allergic skin reaction.
Resp Sens. 1	**H334** May cause allergy or asthma symptoms or breathing difficulties if inhaled.
STOT SE 3	**H335** May cause respiratory irritation.
STOT RE 2	**H373** May cause damage to organs *<or state all organs affected, if known>* through prolonged or repeated exposure *<state route of exposure if it is conclusively proven that no other routes of exposure cause the hazard>*.
Flam. Liq. 3	**H226** Flammable liquid and vapour.
Skin Irrit. 2	**H315** Causes skin irritation.
Eye Irrit. 2	**H319** Causes serious eye irritation.

2.2. **Label elements**
2.2.1. **Labelling according to 1272/2008/EC**

Product identifier: **WANNATE HB-75MX**
Mixture name: **MIXTURE OF HEXAMETHYLENE DIISOCYANATE, OLIGOMERS AND SOLVENTS**

Hazard pictograms:

GHS07 GHS02 GHS08

Signal word: DANGER

Hazard statements:

H226 Flammable liquid and vapour.
H315 Causes skin irritation.
H317 May cause an allergic skin reaction.
H319 Causes serious eye irritation.
H332 Harmful if inhaled.
H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H335 May cause respiratory irritation.
H373 May cause damage to organs through prolonged or repeated exposure.

Precautionary statements:

P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P260 Do not breathe dust/fume/gas/mist/vapours/spray.
P280 Wear protective gloves/protective clothing/eye protection/face protection.
P303+P361+P353 IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.
P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P403+P235 Store in a well-ventilated place. Keep cool.

UFI: ECS0-20Q7-U00G-X3JQ
Supplemental Hazard information (EU):
EUH204 Contains isocyanates. May produce an allergic reaction.

Notes: Note 2
As from 24 August 2023 adequate training is required before industrial or professional use.

2.3. **Other hazards:** The mixture does not meet the criteria for persistent, bioaccumulation and toxicity (PBT) or the criteria for Very Persistent and Very Bioaccumulative (vPvB) in accordance with Annex XIII of 1907/2006/EC. The mixture is not considered to be an endocrine disrupter according to the criteria set out in regulations (EU) 2017/2100 or (EU) 2018/605; or the mixture has not been included in the list established under Article 59 (1) of REACH due to its endocrine disrupting properties. There is no other information on hazards that do not result in classification but which may contribute to the overall hazards of the mixture (such as dustiness, explosive properties, which do not fulfil the classification criteria of part 2 Section 2.1 of Annex I to Regulation (EC) No 1272/2008, dust explosion hazards, cross-sensitisation, suffocation, freezing, high potency for odour or taste, or environmental effects such as hazards to soil-dwelling organisms, or photochemical ozone creation potential).

SECTION 3 Composition/information on ingredients

3.1. **Substances:** Not applicable.

3.2. **Mixtures**

Chemical name	EC number	CAS number	Index number	REACH Registration number	Concentration % (w/w)
Hexamethylene diisocyanate, oligomerisation product (biuret type)	939-340-8	28182-81-2	Not applicable.	01-2119970543-34-0004	ca. 75
2-methoxy-1-methylethyl acetate	203-603-9	108-65-6	607-195-00-7	01-2119475791-29-0023	ca. 12.5
Xylene	215-535-7	1330-20-7	601-022-00-9	01-2119488216-32-0071	ca. 12.5
Hexamethylene diisocyanate	212-485-8	822-06-0	615-011-00-1	01-2119457571-37-0003	≤ 0.5

Chemical name	Classification according to 1272/2008/EC
Hexamethylene diisocyanate, oligomerisation product (biuret type)	Acute Tox. 4, H332 Skin Sens. 1, H317 STOT SE 3, H335
2-methoxy-1-methylethyl acetate	Flam. Liquid 3, H226 STOT SE 3, H336
Xylene	Flam. Liq. 3, H226 Acute Tox. 4, H332 Acute Tox. 4, H312 Skin Irrit. 2, H315 Eye Irrit. 2, H319 Asp. Tox. 1, H304 STOT SE 3, H335 STOT RE 2, H373 Aquatic Chronic 3, H412

Hexamethylene diisocyanate	Acute Tox. 4, H302 Acute Tox. 1, H330 Skin Irrit. 2, H315 Eye Irrit. 2, H319 Resp. Sens. 1, H334 Skin Sens. 1, H317 STOT SE 3, H335 Specific threshold concentration: Resp. Sens. 1, H334 >= 0.5 % Skin Sens. 1, H317 >= 0.5 %

Additional information: Full text of H-phrases: see section 16.

SECTION 4 First aid measures

4.1. **Description of first aid measures**
General advice: Soiled, fairly soaked clothing and shoes must be immediately removed.

4.1.1. **In case of inhalation:** If inhaled, remove to fresh air. If not breathing, give artificial respiration. Get medical attention immediately.

4.1.2. **In case of skin contact:** In the event of contact with the skin, preferably wash with a cleanser based on polyethylene glycol or with plenty of warm water and soap. Consult a doctor in the event of a skin reaction. Wash the less clothing before reuse. Clean shoes thoroughly before reuse.

4.1.3. **In case of eye contact:** Hold the eyes open and rinse with water for a sufficiently long period of time (at least 10 minutes). Get medical attention immediately.

4.1.4. **In case of ingestion:** DO NOT induce the patient to vomit, medical advice is required. Never give anything by mouth to an unconscious person. Provided the patient is conscious, wash out mouth with water.

4.1.5. **Information to physician:** The product irritates the respiratory tract and may trigger sensitisation of the skin and respiratory tract. Treatment of acute irritation or bronchial constriction is primarily symptomatic. Following severe exposure the patient should be kept under medical review for at least 48 hours.

4.2. **Most important symptoms and effects, both acute and delayed:** Headache, nausea, shortness of breath, sore throat, redness on the skin. Repeated or prolonged contact may cause skin sensitization. Repeated or prolonged inhalation exposure may cause asthma.

4.3. **Indication of any immediate medical attention and special treatment needed:** Depending on the degree of exposure, periodic medical examination is suggested.

SECTION 5 Firefighting measures

5.1. **Extinguishing media**
Suitable extinguishing media: Foam, CO_2 or dry powder. Water spray may be used if no other available and then in copious quantities.
Unsuitable extinguishing media: Strong water jet.

5.2. **Special hazards arising from the substance or mixture:** Carbon oxides (CO, CO_2), nitrogen oxides (NO, NO_2 etc.) hydrocarbons, isocyanate vapours and hydrogen cyanide can be released in case of fire.

5.3. **Advice for firefighters**
Special protective equipment: Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode. Safety boots, gloves, safety helmet and protective clothing should be worn.
Further information: In the event of fire and/or explosion do not breathe fumes. Fire in vicinity poses risk of pressure build-up and rupture. Containers at risk from fire should be cooled with water and, if possible, removed from the danger area. Due to reaction with water producing CO_2 gas, a hazardous build-up of pressure could result if contaminated containers are re-sealed. Containers may burst if overheated. Do not allow contaminated extinguishing water to enter the soil, ground-water or surface waters.

SECTION 6 Accidental release measures

6.1. **Personal precautions, protective equipment and emergency procedures:** Immediately contact emergency personnel. Evacuate the area. Keep upwind to avoid inhalation of vapours. Clean-up should only be performed by trained personnel. Keep unauthorized persons away.

6.1.1. **For non-emergency personnel:** Remove not affected people. Inform the relevant authorities.

6.1.2. **For emergency responders:** People dealing with major spillages should wear full protective clothing including respiratory protection. Use suitable protective equipment.

6.2. **Environmental precautions:** Avoid dispersal of spilt material and runoff and contact with drains and sewers.

6.3. **Methods and material for containment and cleaning up:** Absorb spillages onto sand, earth or any suitable adsorbent material. Do not absorb onto sawdust or other combustible materials. Wash the spillage area with water.

6.3.1. **Appropriate containment techniques:** Test atmosphere.

6.3.2. **Appropriate clean-up procedures:** Remove mechanically; cover the remainder with wet, absorbent material (e.g. sawdust, chemical binder based on calcium silicate hydrate, sand). After approx. one hour transfer to waste container and do not seal (evolution of CO_2). Keep damp in a safe ventilated area for several days.

6.4. **Reference to other sections:** See section 1 for emergency contact information and section 13 for waste disposal. Put on appropriate personal protective equipment: see section 8.

SECTION 7 Handling and storage

7.1. **Precautions for safe handling**

7.1.1. **Protective measures:** Provide sufficient air exchange and/or exhaust in workrooms. In all workplaces or parts of the plant where high concentrations of isocyanate aerosols and/or vapours may be generated (e.g. during pressure release, mould venting or when cleaning mixing heads with an air blast), appropriately located exhaust ventilation must be provided in order to prevent occupational exposure limits from being exceeded. The air should be drawn away from the personnel handling the product. The efficiency of the ventilation system must be monitored regularly because of the possibility of blockage. Atmospheric concentrations should be minimised and kept as low as reasonably practicable below the occupational exposure limit.

7.1.2. **Advice on general occupational hygiene:** No eating, drinking, smoking or tobacco use at the place of work. Contact with skin and eyes and inhalation of vapours must be avoided under all circumstances. Keep equipment clean. A basic essential in sampling, handling and storage is the prevention of contact with water. Keep stocks of decontaminant readily available.

7.2. **Conditions for safe storage, including any incompatibilities:** Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials and food and drink. 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. Suitable containers: steel, stainless steel. Unsuitable containers: copper, copper alloy and galvanised surfaces.

7.3. **Specific end use(s):** Not applicable.

SECTION 8 Exposure controls/personal protection

Significant routes of exposure:

Human exposure: by inhalation.
Environmental exposure: through air.
Pattern of exposure: accidental/infrequent.

The recommended control strategies:

1. Employ good industrial hygiene practice.
2. Use local exhaust ventilation.
3. Enclose the process.
4. Seek the advice of a specialist.

8.1. **Control parameters**

8.1.1. **Occupational Exposure Limit values**

Substance: **Hexamethylene diisocyanate**
CAS number: **822-06-0**

Countries	Limit value (8 hours)		Limit value (short term)	
	ppm	mg/m³	ppm	mg/m³
Austria	0.005	0.035	0.005	0.035
Belgium	0.005	0.034	-	-
Denmark	0.005	0.035	0.01	0.07
France	0.01	0.075	0.02	0.15
Germany	0.005	0.035	0.005	0.035
Hungary	-	0.035	-	0.035
Latvia	-	0.05	-	-
Italy	-	1	-	-
Poland	-	0.04	-	0.08
Spain	0.005	0.035	-	-
Sweden	0.002	0.02	0.005	0.03

Source: http://limitvalue.ifa.dguv.de

Substance: **1-methoxypropyl acetate (all isomers)**
CAS number: **108-65-6**

Countries	Limit value (8 hours)		Limit value (short term)	
	ppm	mg/m³	ppm	mg/m³
Austria	50	275	100	550
Belgium	50	275	100	550
Denmark	50	275	100	550
European Union	50	275	100	550
France	50	275	100	550
Germany	50	270	50	270
Hungary	-	275	-	550
Latvia	50	275	100	550
Italy	50	275	100	550
Spain	50	275	100	550
Sweden	50	250	75	400
Switzerland	50	275	50	275
The Netherlands	-	550	-	-
United Kingdom	50	274	100	548

Source: http://limitvalue.ifa.dguv.de

Substance: **Xylene, o-, m-, p- or mixed isomers**
CAS number: **1330-20-7**

Countries	Limit value (8 hours)		Limit value (short term)	
	ppm	mg/m³	ppm	mg/m³
Austria	50	221	100	442
Belgium	50	221	100	442
Denmark	25	109	50	218
European Union	50	221	100	442
France	50	221	100	442
Germany	100	440	200	880
Hungary	-	221	-	442
Latvia	50	221	100	442
Italy	50	221	100	442
Poland	-	100	-	-
Spain	50	221	100	442
Sweden	50	221	100	442

Switzerland	100	435	200	870
The Netherlands	-	210	-	442
United Kingdom	50	220	100	441

Source: http://limitvalue.ifa.dguv.de

8.1.2. **DNEL/PNEC-values**

HDI Trimer (CAS 28182-81-2):
Workers:
Acute/short-term exposure- local effects (inhalation): DNEL = 1.0 mg/m³
Long-term exposure - local effects (inhalation): DNEL = 0.5 mg/m³
General population: Not applicable.

PNEC STP: 6.46 mg/l

2-methoxy-1-methylethyl acetate (CAS 108-65-6):
Workers:
Long-term exposure - systemic effects (inhalation): DNEL = 275 mg/m³
Acute/short term exposure - local effects (inhalation): DNEL = 550 mg/m³
Long-term exposure - systemic effects (dermal): DNEL = 796 mg/kg bw/day
General population:
Long-term exposure - systemic effects (inhalation): DNEL = 33 mg/m³
Long-term exposure - local effects (inhalation): DNEL = 33 mg/m³
Long-term exposure - systemic effects (dermal): DNEL = 320 mg/kg bw/day
Long-term exposure - systemic effects (oral): DNEL = 36 mg/kg bw/day
Acute/short term exposure – systemic effects (oral): DNEL = 500 mg/kg bw/day

PNEC aqua (freshwater): 0.635 mg/l
PNEC aqua (marine water): 0.064 mg/l
PNEC freshwater (intermittent releases): 6.35 mg/l
PNEC STP: 100 mg/l
PNEC sediment (freshwater): 3.29 mg/kg sediment dw (dry weight)
PNEC sediment (marine water): 0.329 mg/kg sediment dw (dry weight)
PNEC soil: 0.29 mg/kg soil dw

Xylene (CAS 1330-20-7):
Workers:
Long-term exposure - systemic effects (inhalation): DNEL = 221 mg/m³
Acute/short term exposure - systemic effects (inhalation): DNEL = 442 mg/m³
Long-term exposure - local effects (inhalation): DNEL = 221 mg/m³
Acute/short term exposure - local effects (inhalation): DNEL = 442 mg/m³
Long-term exposure - systemic effects (dermal): DNEL = 212 mg/kg bw/day
General population:
Long-term exposure - systemic effects (inhalation): DNEL = 65.3 mg/m³
Acute/short term exposure - systemic effects (inhalation): DNEL = 260 mg/m³
Long-term exposure - local effects (inhalation): DNEL = 65.3 mg/m³
Acute/short term exposure - local effects (inhalation): DNEL = 260 mg/m³
Long-term exposure - systemic effects (dermal): DNEL = 125 mg/kg bw/day
Long-term exposure - systemic effects (oral): DNEL = 12.5 mg/kg bw/day

PNEC aqua (freshwater): 0.327 mg/l
PNEC aqua (marine water): 0.327 mg/l
PNEC freshwater (intermittent releases): 0.327 mg/l
PNEC STP: 6.58 mg/l

PNEC sediment (freshwater):	12.46 mg/kg sediment dw (dry weight)
PNEC sediment (marine water):	12.46 mg/kg sediment dw (dry weight)
PNEC soil:	2.31 mg/kg soil dw

8.2. **Exposure controls**

8.2.1. **Appropriate engineering controls:** Provide suitable exhaust ventilation at the processing machines.
8.2.2. **Personal protection equipment**
8.2.2.1. **Eye/Face protection:** Closed safety glasses.
8.2.2.2. **Skin protection**
Hand protection: Chemical resistant protective gloves.
Examples of gloves materials that might provide suitable protection include:
Butyl rubber (BR), Polychloroprene (Neoprene), Nitrile/butadiene rubber (NBR).
Body protection: Safety shoes and closed work clothing.
8.2.2.3. **Respiratory protection:** Breathing apparatus, full face mask respirator. Respirators type protection can be used in combination with an organic vapour filter type A and where dusts or aerosols could be present with a minimum of A/P2 filter.

8.2.2.4. **General safety and hygiene measures:** Do not breathe vapours/spray. Keep away from drink, food and animal feeding stuffs. No eating, drinking, smoking or tobacco use at the place of work. Hands and face should be washed before breaks and at the end of shift. At the end of the shift the skin should be cleaned and skin-care agents applied.
8.2.3. **Environmental exposure controls**: In accordance with local and national regulations.

SECTION 9 Physical and chemical properties

9.1. **Information on basic physical and chemical properties**

Physical state:	liquid (at 20 °C, 1013 hPa)
Colour:	colorless to pale yellow
Odour:	No data.
Melting point/freezing point:	No data.
Boiling point or initial boiling point and boiling range:	No data.
Flammability:	Flammable.
Lower and upper explosive limit:	
*2-methoxy-1-methylethyl acetate (CAS 108-65-6):*1	1.5/10.8 % (v/v)
Xylene (CAS 1330-20-7):	1.0/7.0 % (v/v)
Flash point:	ca. 38 °C
Auto-ignition temperature:	No data.
Decomposition temperature:	No data.
pH:	No data.
Kinematic viscosity:	No data.
Solubility(ies):	Water: Insoluble. Polar and non-polar solvents: No data.
Partition coefficient: n-octanol/water:	Not applicable.
Vapour pressure:	No data.
Density and/or relative density:	ca. 1.07 g/cm³ (at 25 °C)
Relative vapour density:	No data.
Particle characteristics:	Not applicable.

9.2. **Other information**
9.2.1. **Information with regard to physical hazard classes**

Explosive properties:	No data.
Oxidising properties:	No data.
9.2.2. **Other safety characteristics:**	No data.

SECTION 10 Stability and reactivity

10.1. **Reactivity:** Stable under recommended conditions.

10.2. **Chemical stability**

The main removal mechanism of HDI Trimer in the environment is hydrolysis. HDI Trimer reacts quickly with water to form predominantly solid, insoluble polyureas.

Stability in organic solvents: In protic solvents like alcohols, isocyanates react rapidly. Isocyanates form urethanes in alcohol. Stability is expected with non-protic solvents like toluene, acetone, dioxane etc. The concentration of HDI Trimer in an acetonitrile solution without addition of water was stable within 26 hours.

10.3. **Possibility of hazardous reactions:** Reaction is slow with cold or warm water (< 50 °C), with hot water or steam the reaction is faster, producing carbon-dioxide causing pressure increase.

10.4. **Conditions to avoid:** High temperature, freezing, moisture, strong light.

10.5. **Incompatible materials:** Water, acids, alcohols, amines, bases and oxidising agents.

10.6. **Hazardous decomposition products:** No hazardous decomposition products if stored and handled as prescribed/indicated.

SECTION 11 Toxicological information

No results of animal experiments with this mixture are available.

11.1. **Information on hazard classes as defined in Regulation (EC) No 1272/2008**

11.1.1 **Acute toxicity**

HDI Trimer (CAS 28182-81-2):

Acute toxicity – oral:	
Rats (male/female)	LD50 > 5000 mg/kg bw (14 days)
Method: OECD Guideline 401	
Acute toxicity – aerosol inhalation:	
Rats (female/male)	LC50 = 402 mg/ m³ air (4 h)
Method: OECD Guideline 403	
Acute toxicity – dermal:	
Rabbits (female)	LD50 > 15800 mg/kg bw
Method: OECD Guideline 402	

2-methoxy-1-methylethyl acetate (CAS 108-65-6):

Acute toxicity – oral:	
Rats (male/female)	LD50 = 6190 mg/kg bw
Method: OECD Guideline 401	
Acute toxicity – inhalation (vapour):	
Rats (male/female)	LC0 > 1728 ppm (4 h)
Method: OECD Guideline 403	
Acute toxicity – dermal:	
Rabbits (male/female)	LD50 > 5000 mg/kg bw (24 h)
Method: OECD Guideline 402	

Xylene (CAS 1330-20-7):

Acute toxicity – oral:	
Rats (male)	LD50 = 3523 mg/kg bw
Method: EU Method B.1	
Acute toxicity – inhalation (vapour):	
Rats (male)	LC50 = 6700 ppm (29091 mg/m³) air (4 h)
Method: EU Method B.2	
Acute toxicity – dermal:	
Rabbits (male)	LD50 = 12126 mg/kg bw (24 h)
Method: Other guideline.	

11.1.2. **Skin corrosion/irritation**

HDI Trimer (CAS 28182-81-2):

Rabbits	Not irritating. (4 h)
Method: OECD Guideline 404	

2-methoxy-1-methylethyl acetate (CAS 108-65-6):

Rabbits	Not irritating. (4 h)
Method: OECD Guideline 404	

11.1.3. **Serious eye damage/irritation**

HDI Trimer (CAS 28182-81-2):

Rabbits	Not irritating. (72 h)

Method: OECD Guideline 405

2-methoxy-1-methylethyl acetate (CAS 108-65-6):

Rabbits	Not irritating. (7 days)

Method: OECD Guideline 405

Xylene (CAS 1330-20-7):

Rabbits	Slightly irritating.

Method: Other guideline.

(Read-across based on o-xylene - CAS 95-47-6.)

11.1.4. **Respiratory or skin sensitisation**

HDI Trimer (CAS 28182-81-2):

Skin sensitization:

Guinea pigs (male)	Sensitizing.

Method: Other guideline.

Respiratory sensitization:

Rats (male)	Not sensitizing.

Method: Other guideline.

2-methoxy-1-methylethyl acetate (CAS 108-65-6):

Skin sensitization:

Guinea pigs (male/female)	Not sensitizing.

Method: OECD Guideline 406

11.1.5. **Germ cell mutagenicity**

HDI Trimer (CAS 28182-81-2):

Chromosome aberration, in vitro:

Chinese hamster (ovary)	Negative. (4 h)

Method: OECD Guideline 473

2-methoxy-1-methylethyl acetate (CAS 108-65-6):

Gene mutation, in vitro:

Salmonella typhimurium	Negative. (48 h)

Method: OECD Guideline 471

Xylene (CAS 1330-20-7):

Chromosome aberration, in vitro:

Chinese hamsters (ovary)	Negative.

Method: EU Method B.10

Chromosome aberration, in vivo:

Mice (male)	Negative.

Method: OECD Guideline 478

11.1.6. **Carcinogenicity**

2-methoxy-1-methylethyl acetate (CAS 108-65-6):

Rats (inhalation: vapour; male/female)	NOEL = 3000 ppm (2 years, 6 h/day, 5 days/week)

Method: OECD Guideline 453

(Read-across based on 1-methoxypropan-2-ol – CAS 107-98-2.)

Xylene (CAS 1330-20-7):

Rats (oral; male/female)	Negative. (103 weeks, 5 days/week, 1/day)

Method: EU Method B.32

11.1.7. **Reproductive toxicity**

2-methoxy-1-methylethyl acetate (CAS 108-65-6):

Developmental toxicity:

Rats (inhalation: vapour; male/female)	NOAEL = 500 ppm (2700 mg/ m^3) (21 days, 6 h/day)

Method: OECD Guideline 414

(Read-across based on 1-methoxypropan-2-ol – CAS 107-98-2.)

Xylene (CAS 1330-20-7):

Rats (inhalation: vapour; male/female):	NOAEC >= 500 ppm (2171 mg/m^3) (70 days, 6 h/day, 7 days/week)

Method: EPA OPPTS 870.3800

11.1.8. **STOT-single exposure**
HDI Trimer (CAS 28182-81-2), Xylene (CAS 1330-20-7): It may cause respiratory irritation.
2-methoxy-1-methylethyl acetate (CAS 108-65-6): May cause drowsiness or dizziness.

11.1.9. **STOT-repeated exposure**
HDI Trimer (CAS 28182-81-2):
Rats (inhalation: aerosol; male/female) NOAEC = 3.7 mg/m^3 air (13 weeks, 6 h/day, 5 days/ week)
Method: OECD Guideline 412
2-methoxy-1-methylethyl acetate (CAS 108-65-6):
Rats (oral; male/female) NOAEL >= 1000 mg/kg bw/day (41-45 days, daily)
Method: OECD Guideline 422
Rats (inhalation: vapour; male/female) NOAEL = 1000 ppm (13 weeks, 6 h/day, 5 days/week)
Method: OECD Guideline 413
(Read-across based on 1-methoxypropan-2-ol – CAS 107-98-2.)
Rabbits (dermal; male/female) NOAEL > 1000 mg/kg bw/day (21 days, 1/day)
Method: OECD Guideline 410
Xylene (CAS 1330-20-7):
Rats (oral; male/female) NOAEL = 250 mg/kg bw/day (103 weeks, 5 days/week, 1/day)
Method: EU Method B.32

11.1.10. **Aspiration hazard:** No data.

11.2. **Information on other hazards**

11.2.1. **Endocrine disrupting properties:** Based on available data, the classification criteria are not met.

11.2.2. **Other information**: No data.

SECTION 12 Ecological information

Ecotoxicological tests with this mixture are not available.

12.1. **Toxicity**

12.1.1. **Aquatic toxicity**
HDI Trimer (CAS 28182-81-2):
Short-term toxicity to fish:
Freshwater fish (Danio rerio) LL0 >= 100 mg/l (96 h)
Method: EU Method C.1
Short-term toxicity to aquatic invertebrates:
Freshwater invertebrates (Daphnia magna) EL0 >= 100 mg/l (48 h)
Method: EU Method C.2
Toxicity to aquatic algae and cyanobacteria:
Freshwater algae (Desemodesmus subspicatus) EL50 > 100 mg/l (72 h)
Method: EU Method C.3
Toxicity to microorganisms:
Microorganisms (activated sludge) EC50 = 645.7 mg/l (3h)
Method: EU Method C.11
2-methoxy-1-methylethyl acetate (CAS 108-65-6):
Short-term toxicity to fish:
Freshwater fish (Oncorhynchus mykiss) LC50 = 100-180 mg/l (96 h)
Method: OECD Guideline 203
Long-term toxicity to fish:
Freshwater fish (Oryzias latipes) LC50 = 63.5 mg/l (14 days)
Method: OECD Guideline 204
Short-term toxicity to aquatic invertebrates:
Freshwater invertebrates (Daphnia magna) EC50 > 500 mg/l (48 h)
Method: EU Method C.2
Long-term toxicity to aquatic invertebrates:
Freshwater invertebrates (Daphnia magna) NOEC ≥ 100 mg/l (21 days)
Method: OECD Guideline 211

Toxicity to aquatic algae and cyanobacteria:	
Freshwater algae (Pseudokirchnerella subcapitata)	NOEC ≥ 1000 mg/l (96 h)
Method: OECD Guideline 201	
Toxicity to microorganisms:	
Microorganisms (activated sludge)	EC10 > 1000 mg/l (30 min)
Method: OECD Guideline 209	
Xylene (CAS 1330-20-7):	
Short-term toxicity to fish:	
Freshwater fish (Oncorhynchus mykiss)	LC50 = 8.4 mg/l (96 h)
Method: OECD Guideline 203	
(Read-across.)	
Long-term toxicity to fish:	
Freshwater fish (Oncorhynchus mykiss)	NOEC > 1.3 mg/l (56 days)
Method: Other guideline.	
Short-term toxicity to aquatic invertebrates:	
Freshwater invertebrates (Daphnia magna)	IC50 = 4.7 mg/l (24 h)
Method: OECD Guideline 202	
(Read-across.)	
Long-term toxicity to aquatic invertebrates:	
Freshwater invertebrates (Ceriodaphnia dubia)	NOEC = 1.17 mg/l (7 days)
Method: US EPA 600/4-91-003	
(Read-across.)	
Toxicity to aquatic algae and cyanobacteria:	
Freshwater algae (Pseudokirchnerella subcapitata)	EC50 = 4.9 mg/l (72 h)
Method: OECD Guideline 201	
(Read-across.)	
Toxicity to microorganisms:	
Microorganisms (activated sludge)	NOEC = 16 mg/l (28 days)
Method: OECD Guideline 301 F	
(Read-across.)	

12.2. **Persistence and degradability**

HDI Trimer (CAS 28182-81-2):	
Biodegradation in water:	
Degradation	1 % (28 days)
Method: EU Method C.4-E	
2-methoxy-1-methylethyl acetate (CAS 108-65-6):	
Biodegradation in water:	
Degradation	90 % (28 days)
Method: OECD Guideline 301 F	
Xylene (CAS 1330-20-7):	
Phototransformation in air:	
Half-life (DT50)	23.2 h
Method: Other guideline.	
(Read-across.)	
Biodegradation in water:	
Degradation	98 % (28 days)
Method: OECD Guideline 301 F	

12.3. **Bioaccumulative potencial**

Xylene (CAS 1330-20-7):	
Bioaccumulation - aquatic/sediment:	
BCF	25.9 (56 days)
Method: Other guideline.	
(Read-across.)	

12.4. **Mobility in soil**
Xylene (CAS 1330-20-7):
Adsorption-desorption:
log Koc 2.73
Method: OECD Guideline 121
(Read-across.)
Volatilisation:
H (Henry's Law Constant) 623-665 Pa.m³/mol (at 25 °C)
Method: EPISiute v4.00

12.5. **Results of PBT and vPvB assessment:** The mixture does not meet the criteria for persistent, bioaccumulation and toxicity (PBT) or the criteria for Very Persistent and Very Bioaccumulative (vPvB) in accordance with Annex XIII of 1907/2006/EC.

12.6. **Endocrine disrupting properties:** Based on available data, the classification criteria are not met.

12.7. **Other adverse effects:** It is not expected that mixture has an effect on global warming, ozone depletion in the stratosphere or ozone formation in the troposphere.
Secondary poisoning: Based on the available information, there is no indication of a bioaccumulation potential and, hence, secondary poisoning is not considered relevant. Exposure to birds is not expected.

SECTION 13 Disposal considerations

13.1 **Waste treatment methods:** The products becoming useless and the contaminated containers not suitable for product storage must be handled as hazardous waste in accordance with EU and regional hazardous waste regulations.

13.1.1 **Product/Packaging disposal:** Contaminated packaging should be emptied as far as possible; than it can be passed on for recycling after being thoroughly cleaned. Wrappings cleaned from contamination with suitable cleaning process (e.g. by steaming, treating with washing fluid, etc.) must be considered as non-hazardous waste.

13.1.2. **Waste treatment-related information:** Incinerate in suitable incineration plant, observing local authority regulations.

SECTION 14 Transport information

Land transport (ADR/RID/GGVSE)
Sea transport (IMDG-Code/GGVSee)
Air transport (ICAO-IATA/DGR)

14.1.	UN number or ID number:	1993
14.2.	UN proper shipping name:	FLAMMABLE LIQUID, N.O.S. (CONTAINS XYLENE AND METHOXY-1-METHYLETHYL ACETATE)
14.3.	Transport hazard class(es):	3
	Classification code:	F1
14.4.	Packing group:	III
	Labels:	3
14.5.	Environmental hazards:	No.
	Marine pollutant:	No.
14.6.	Special precautions for users	
	EmS number:	F-E, S-E

14.7. Maritime transport in bulk according to IMO instruments: Not relevant.

SECTION 15 Regulatory information

15.1. **Safety, health and environmental regulations/legislation specific for the substance or mixture**
Regulation (EC) No 1005/2009 of the European Parliament and of the Council of 16 September 2009 on substances that deplete the ozone layer: It does not fall within its scope.
Regulation (EC) No 850/2004 of the European Parliament and of the Council of 29 April 2004 on persistent organic pollutants and amending Directive 79/117/EEC: It does not fall within its scope.

Regulation (EU) No 649/2012 of the European Parliament and of the Council of 4 July 2012 concerning the export and import of hazardous chemicals: It does not fall within its scope.
Directive 2012/18/EU of the European Parliament and of the Council of 4 July 2012 on the control of major-accident hazards involving dangerous substances, amending and subsequently repealing Council Directive 96/82/EC: Seveso Cat.: P5.c.

15.1.1. **EU regulations**

- Regulation (EC) No 1272/2008 of the European Parliament and of the Council of 16 December 2008 on classification, labelling and packaging of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No 1907/2006.
- REGULATION (EC) No 1907/2006 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 18 December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH), establishing a European Chemicals Agency, amending Directive 1999/45/EC and repealing Council Regulation (EEC) No 793/93 and Commission Regulation (EC) No 1488/94 as well as Council Directive 76/769/EEC and Commission Directives 91/155/EEC, 93/67/EEC, 93/105/EC and 2000/21/EC.
  ANNEX XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles:
  74. Diisocyanates, O = C=N-R-N = C=O, with R an aliphatic or aromatic hydrocarbon unit of unspecified length
- Directive 2008/98/EC of the European Parliament and of the Council of 19 November 2008 on waste and repealing certain Directives.
- International Chemical Safety Cards (WHO/IPCS/ILO)
- ISOPA guidelines (www.isopa.org)

15.2. **Chemical safety assessment:** In accordance with REACH Chemical Safety Assessment has not been carried out for the mixtures.

SECTION 16 Other information

16.1. **Indication of changes**

This version replaces all previous versions.
Amendments have been made to Safety Data Sheet Version 8.0 in Sections 2.1, 2.2, 3.2, 16.1, 16.4.

16.2. **Abbreviations and acronyms**

Acute Tox.: Acute Toxicity
BCF: Bioconcentration factor
BOD: Biochemical oxygen demand
bw: bodyweight
Carc.: Carcinogenicity
CAS number: Chemical Abstracts Service number
CLP: Classification Labelling Packaging Regulation
COD: Chemical oxygen demand
DNEL: Derived No Effect Level
dw: dry weight
EC: European Commission
EC number: EINECS and ELINCS number
EC50: Half maximal effective concentration
EINECS: European Inventory of Existing Commercial Chemical Substances
ELINCS: European List of Notified Chemical Substances
Eye Irrit.: Eye irritation
IC: Inhibitory growth concentration
LC50: Lethal concentration, 50%
LD50: Median Lethal dose
LL: Lethal loading rate
LOAEC: Lowest Observed Adverse Effect Concentration
NOAEC: No Observed Adverse Effect Concentration

NOEC: No Observed Effect Concentration
PBT: Persistent, Bioaccumulative and Toxic
PNEC: Predicted No Effect Concentration
REACH: The Registration, Evaluation, Authorisation and Restriction of Chemicals
Resp. Sens.: Respiratory sensitization
Skin Irrit.: Skin irritation
Skin Sens.: Skin sensitization
STOT: Specific Target Organ Toxicity
STP: Sewage Treatment Plant
vPvB: Very Persistent and Very Bioaccumulative

16.3. **Key literature references and sources for data**: Registration dossier for HDI Trimer (biuret type) (EC 939-340-8), 2-methoxy-1-methylethyl acetate (CAS 108-65-6), xylene (CAS 1330-20-7) and Wanhua product information.

16.4. **Classification for mixture and used evaluation method according to Regulation (EC) 1272/2008 (CLP)**

Classification according to Regulation (EC) 1272/2008	Classification procedure
Acute Tox. 4	Additivity formula.
Skin Sens. 1	Generic concentration limits.
Resp Sens.1	Generic concentration limits.
STOT SE 3	Generic concentration limits.
Flam. Liq. 3	Test data.
STOT RE 2	Generic concentration limits.
Skin Irrit. 2	Generic concentration limits.
Eye Irrit. 2	Generic concentration limits.

16.5. Mentioned H phrases

H226	Flammable liquid and vapour.
H302	Harmful if swallowed.
H304	May be fatal if swallowed and enters airways.
H312	Harmful in contact with skin.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H319	Causes serious eye irritation.
H330	Fatal if inhaled.
H332	Harmful if inhaled.
H334	May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H335	May cause respiratory irritation.
H336	May cause drowsiness or dizziness.
H373	May cause damage to organs <*or state all organs affected, if known*> through prolonged or repeated exposure <*state route of exposure if it is conclusively proven that no other routes of exposure cause the hazard*>.
H412	Harmful to aquatic life with long lasting effects.

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Safety Data Sheet
WANNATE HB-75MX

www.whchem.com

This SDS is prepared for the purpose of providing health, safety and environmental data. The information given corresponds with our actual knowledge and experience. While the descriptions, data and information contained in the present datasheet are provided in good faith, these are to be considered as guidance only.

This information is meant to describe our product in view of possible safety requirements, but it remains the responsibility of the customer to determine the applicability of the information and suitability of any product for its own particular purpose, to provide a safe workplace and comply with all applicable laws and regulations.

Since handling, storage, use and disposal is of the product are beyond our control and our knowledge, we do exclude any responsibility connecting to handling, storage, use or disposal of this product.

Please note that if the product used as a component of another product, this SDS information may not be applicable.

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