



# Nautilus Poly Mark III comp. B

Issued on 01/05/2023 - Rel. # 11 on 01/05/2023 n° batch 284-B2

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In conformity to Regulation (EU) 2020/878

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

### 1.1. Product identifier

Product code : Nautilus Poly Mark III comp. B  
Trades code : 98500

UFI: AE80-J025-700J-G2M5

### 1.2. Relevant identified uses of the substance or mixture and uses advised against

Painting product  
Sectors of use:  
Public domain[SU22]  
Product category:  
Coatings and Paints, Fillers, Putties, Thinners

Uses advised against  
Do not use for purposes other than those listed

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

CECCHI GUSTAVO & C. srl  
via M. Coppino 253  
55049 Viareggio (LU)  
P.IVA/ CF 00197850464  
SDI T04ZHR3

### 1.4. Emergency telephone number

Centro antiveleni, Azienda ospedaliera Papa Giovanni XXIII, tossicologia clinica, Dipartimento di farmacia clinica e farmacologia, piazza OMS 1, Bergamo - Tel. 800883300 Centro antiveleni

Azienda ospedaliera universitaria Careggi, U.O. Tossicologia medica, via Largo Brambilla 3, Firenze - Tel. 0557947819 Centro antiveleni

Azienda ospedaliera universitaria riuniti, viale Luigi Pinto 1, Foggia - Tel. 0881732326 Centro antiveleni

Azienda ospedaliera Niguarda Ca' Grande, piazza Ospedale Maggiore 3, Milano - Tel. 0266101029 Centro antiveleni

## SECTION 2. Hazards identification

### 2.1. Classification of the substance or mixture

2.1.1 Classification according to Regulation (EC) No 1272/2008:

Pictograms:  
GHS02, GHS07, GHS08

Hazard Class and Category Code(s):  
Flam. Liq. 3, Skin Irrit. 2, Skin Sens. 1, Eye Irrit. 2, Acute Tox. 4, STOT SE 3, STOT RE 2

Hazard statement Code(s):  
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.  
H335 - May cause respiratory irritation.  
H373 - May cause damage to organs through prolonged or repeated exposure.



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The product is a liquid that ignites at temperatures above 23 °C if it exposed to an ignition source.

Harmful product: do not inhale

If brought into contact with eyes, the product causes irritations which may last for over 24 hours, if brought into contact with the skin, it causes inflammation and, if inhaled causes irritation to the respiratory tract.

The product, if brought into contact with skin can cause skin sensitization.

Warning: This product can cause serious irreversible damages to man's health through prolonged or repeated exposure

## 2.2. Label elements

Labelling according to Regulation (EC) No 1272/2008:

Pictogram, Signal Word Code(s):  
GHS02, GHS07, GHS08 - Warning



Hazard statement Code(s):

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.

H335 - May cause respiratory irritation.

H373 - May cause damage to organs through prolonged or repeated exposure.

Supplemental Hazard statement Code(s):  
not applicable

Precautionary statements:

Prevention

P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

P260 - Do not breathe mist/vapours/spray.

P280 - Wear protective gloves/protective clothing/eye protection/face protection.

Response

P314 - Get medical advice/attention if you feel unwell.

P333+P313 - If skin irritation or rash occurs: Get medical advice/attention.

P337+P313 - If eye irritation persists: Get medical advice/attention.

P370+P378 - In case of fire: Use carbon dioxide, foam, chemical powder to extinguish.

Storage

P403+P235 - Store in a well-ventilated place. Keep cool.

Disposal

P501 - Dispose of contents/container in accordance with current regulations

Contains:

Poly(hexamethylene diisocyanate), xylene, hexamethylene-di-isocyanate

As of August 24, 2023, industrial or professional use is allowed only after receiving appropriate training.

Two-pack reactive performance coatings for specific end use such as floors - VOC limit 500 g/l

Content of VOC ready to use condition: 343,20 g/L

UFI: AE80-J025-700J-G2M5

## 2.3. Other hazards

Based on the available data, no PBT or vPvB substances are present in accordance with Regulation (EC)



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1907/2006, annex XIII

Based on available data, the product does not contain PBT or vPvB substances in a concentration  $\geq 0.1\%$ . The product does not contain substances with endocrine-disrupting properties in concentration  $\geq 0.1\%$ .

The use of this chemical agent involves the obligation of "risk assessment" by the employer in accordance with the provisions of Legislative Decree n. 81 April 9, 2008. Workers exposed to this chemical agent should not be subject to health surveillance if the results of the risk assessment show that, depending on the type and amount of hazardous chemical agent and the method and frequency of exposure to the agent, you only a "moderate risk" for the health and safety of workers and that the measures envisaged in the same legislative decree are sufficient to reduce the risk.

## SECTION 3. Composition/information on ingredients

### 3.1 Substances

Irrilevant

### 3.2 Mixtures

Refer to paragraph 16 for full text of hazard statements

Substance	Concentration [w/w]	Classification	Index	CAS	EINECS	REACH
Poly(hexamethylene diisocyanate)	$\geq 64,92$ $< 69,72\%$	Skin Sens. 1, H317; Acute Tox. 4, H332; STOT SE 3, H335 ATE oral $> 2.500,0$ mg/kg ATE dermal $> 2.000,0$ mg/kg ATE inhal = $543,0$ mg/l/4 h	ND	28182-81-2	500-060-2	-
2-methoxy-1-methylethyl acetate	$\geq 17,85$ $< 20,65\%$	Flam. Liq. 3, H226; STOT SE 3, H336 ATE oral = $6,2$ mg/kg ATE dermal $> 2.000,0$ mg/kg	607-195-00-7	108-65-6	203-603-9	01-2119475 791-29-XXX X
xylene	$\geq 10,00$ $< 12,65\%$	Flam. Liq. 3, H226; Acute Tox. 4, H312; Skin Irrit. 2, H315; Acute Tox. 4, H332 ATE oral = $3.600,0$ mg/kg ATE dermal = $4.300,0$ mg/kg ATE inhal = $6.700,0$ mg/l/4 h	601-022-00-9	1330-20-7	215-535-7	01-2119488 216-32-XXX X
isopropyl acetate	$\geq 1,60$ $< 2,40\%$	Flam. Liq. 2, H225; Eye Irrit. 2, H319; STOT SE 3, H336 ATE oral = $6.750,0$ mg/kg ATE dermal $> 20.000,0$ mg/kg ATE inhal = $63,8$ mg/l/4 h	607-024-00-6	108-21-4	203-561-1	01-2119537 214-46-0000

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Substance	Concentration [w/w]	Classification	Index	CAS	EINECS	REACH
hexamethylene-di-isocyanate	>= 0,10 < 0,32%	Skin Irrit. 2, H315; Skin Sens. 1, H317; Eye Irrit. 2, H319; Acute Tox. 3, H331; Resp. Sens. 1, H334; STOT SE 3, H335 Limits: Resp. Sens. 1, H334 %C >=0,5; Skin Sens. 1, H317 %C >=0,5; , EUH208 0,05<= %C <0,5; ATE oral = 745,0 mg/kg ATE dermal > 7.000,0 mg/kg ATE inhal = 0,1mg/l/4 h	615-011-00-1	822-06-0	212-485-8	01-21194575 71-37-XXXX

**SECTION 4. First aid measures****4.1. Description of first aid measures**

EYES: Remove any contact lenses. Wash immediately and thoroughly with water for at least 15 minutes, opening the eyelids wide.

Seek medical attention if the problem persists.

SKIN: Remove contaminated clothing. Shower immediately. Get medical attention immediately. Wash contaminated clothing before reuse them.

INHALATION: Remove the person to fresh air. If breathing ceases, give artificial respiration. Call a physician immediately.

INGESTION: Call a physician immediately. Do not induce vomiting. Do not administer anything that is not expressly authorized by the physician.

**4.2. Most important symptoms and effects, both acute and delayed**

No specific information on symptoms and effects caused by the product is known.

**4.3. Indication of any immediate medical attention and special treatment needed**

Information not available

**SECTION 5. Firefighting measures****5.1. Extinguishing media**

SUITABLE EXTINGUISHING MEDIA

Extinguishing media are: carbon dioxide, foam, chemical powder. For product spills and leaks that have not ignited, water



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spray can be used to disperse flammable vapors and protect people engaged in stopping the spill.

**UNSUITABLE EXTINGUISHING MEDIA**

Do not use water jets. Water is not effective in extinguishing the fire however it can be used to cool closed containers exposed to the flame preventing bursts and explosions.

## 5.2. Special hazards arising from the substance or mixture

Overpressure can be created in containers exposed to fire with danger of explosion. Avoid breathing the products of combustion.

## 5.3. Advice for firefighters

**GENERAL INFORMATION**

Cool containers with jets of water to prevent decomposition of the product and the development of substances potentially hazardous to health.

Always wear full fire protection equipment. Collect firefighting water that must not be discharged into the sewers. Dispose of contaminated water used for extinguishing and fire residue according to applicable regulations.

**EQUIPMENT**

Normal fire-fighting clothing, such as an open-circuit self-contained compressed air breathing apparatus (EN 137), flame-resistant suit (EN469), gloves flame-resistant (EN 659) and firefighting boots (HO A29 or A30).

## SECTION 6. Accidental release measures

### 6.1. Personal precautions, protective equipment and emergency procedures

6.1.1 For non-emergency personnel:

Keep unequipped people away. Use explosion-proof equipment. Eliminate all sources of ignition (cigarettes, flames, sparks, etc.) or heat from the area where the leak occurred.

6.1.2 For emergency responders:

Stop the leak if there is no danger.

Wear appropriate protective equipment (including personal protective equipment listed in section 8 of the MSDS) to

prevent contamination of skin, eyes and personal clothing. These directions apply to both work crews and emergency responders.

### 6.2. Environmental precautions

Contain spill with earth or sand.

If the product has entered a watercourse in sewers or has contaminated soil or vegetation, notify it to the authorities.

Discharge the remains in compliance with the regulations



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## 6.3. Methods and material for containment and cleaning up

### 6.3.1 For containment:

Rapidly recover the product, wear a mask and protective clothing  
Recover the product for reuse, if possible, or for removal. Possibly absorb it with inert material.  
Prevent it from entering the sewer system.

### 6.3.2 For cleaning up:

After wiping up, wash with water the area and materials involved

### 6.3.3 Other information:

Vacuum the spilled product into suitable container. Assess the compatibility of the container to be used with the product by checking section 10.  
Absorb the remaining with inert absorbent material.  
Provide sufficient ventilation of the place affected by the spill. Disposal of the contaminated material should be carried out in accordance with the provisions of Section 13.

## 6.4. Reference to other sections

Refer to paragraphs 8 and 13 for more information

## SECTION 7. Handling and storage

### 7.1. Precautions for safe handling

Keep away from heat, sparks and open flames; do not smoke or use matches or lighters. Without adequate ventilation, vapors can accumulate on the ground and ignite even at a distance, if ignited, with danger of flashback. Avoid the accumulation of electrostatic charges.  
Connect to a grounding outlet in the case of large packages during pouring operations and wear antistatic shoes. The strong agitation and vigorous flow of liquid in pipes and equipment can cause electrostatic charge formation and accumulation.  
To avoid the danger of fire and bursting, never use compressed air in handling. Open containers with caution, as they may be under pressure. Do not eat, drink or smoke during use. Avoid dispersion of the product into the environment.

### 7.2. Conditions for safe storage, including any incompatibilities

Keep in original container closed tightly. Do not store in open or unlabeled containers.  
Keep containers upright and safe by avoiding the possibility of falls or collisions.  
Store in a cool place, away from sources of heat and direct exposure of sunlight.  
Always store in well ventilated areas.  
Never close the container tightly, leave a chance to vent  
Keep away from open flames, sparks and heat sources. Avoid direct sunlight exposure.

### 7.3. Specific end use(s)

Public domain:

Handle with care. Store in a ventilated area and away from heat, keep the container tightly closed.

## SECTION 8. Exposure controls/personal protection



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## 8.1. Control parameters

Related to contained substances:  
2-methoxy-1-methylethyl acetate:  
MAK: 50 ppm; 275 mg/m<sup>3</sup>; (1996)

xilene  
OELV 8h 50 ppm 221 mg/m<sup>3</sup>  
OELV short term 100 ppm 442 mg/m<sup>3</sup>

isopropyl acetate  
TLV: 250 ppm; 1040 mg/m<sup>3</sup> (as TWA) (ACGIH 1997). TLV (come STEL): 310 ppm; 1290 mg/m<sup>3</sup> (ACGIH 1997).

hexamethylene-1,6-diisocyanate  
TLV: 0.005 ppm come TWA (ACGIH 2004).

- Substance: Poly(hexamethylene diisocyanate)  
DNEL  
Local effects Long term Workers inhalation = 0,5 (mg/m<sup>3</sup>)  
Local effects Short term Workers inhalation = 1 (mg/m<sup>3</sup>)  
PNEC  
Sweet water = 0,127 (mg/l)  
sediment Sweet water = 266701 (mg/kg/sediment)  
Sea water = 0,013 (mg/l)  
sediment Sea water = 26670 (mg/kg/sediment)  
STP = 88 (mg/l)  
ground = 53183 (mg/kg ground)

- Substance: 2-methoxy-1-methylethyl acetate  
DNEL  
Systemic effects Long term Workers inhalation = 275 (mg/m<sup>3</sup>)  
Systemic effects Long term Workers dermal = 796 (mg/kg bw/day)  
Systemic effects Long term Consumers inhalation = 33 (mg/m<sup>3</sup>)  
Systemic effects Long term Consumers dermal = 320 (mg/kg bw/day)  
Systemic effects Long term Consumers oral = 36 (mg/kg bw/day)  
Systemic effects Short term Consumers oral = 500 (mg/kg bw/day)  
Local effects Long term Consumers inhalation = 33 (mg/m<sup>3</sup>)  
Local effects Short term Workers inhalation = 550 (mg/m<sup>3</sup>)  
PNEC  
Sweet water = 0,635 (mg/l)  
sediment Sweet water = 3,29 (mg/kg/sediment)  
Sea water = 0,064 (mg/l)  
sediment Sea water = 0,329 (mg/kg/sediment)  
STP = 100 (mg/l)  
ground = 0,29 (mg/kg ground)

- Substance: xylene  
DNEL  
Systemic effects Long term Workers inhalation = 221 (mg/m<sup>3</sup>)  
Systemic effects Long term Workers dermal = 212 (mg/kg bw/day)  
Systemic effects Long term Consumers inhalation = 65,3 (mg/m<sup>3</sup>)  
Systemic effects Long term Consumers dermal = 125 (mg/kg bw/day)  
Systemic effects Long term Consumers oral = 12,5 (mg/kg bw/day)  
Systemic effects Short term Workers inhalation = 442 (mg/m<sup>3</sup>)  
Systemic effects Short term Consumers inhalation = 260 (mg/m<sup>3</sup>)  
Local effects Long term Workers inhalation = 221 (mg/m<sup>3</sup>)  
Local effects Long term Consumers inhalation = 65,3 (mg/m<sup>3</sup>)



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Local effects Short term Workers inhalation = 442 (mg/m<sup>3</sup>)  
Local effects Short term Consumers inhalation = 260 (mg/m<sup>3</sup>)

PNEC

Sweet water = 0,327 (mg/l)  
sediment Sweet water = 12,46 (mg/kg/sediment)  
Sea water = 0,327 (mg/l)  
sediment Sea water = 12,46 (mg/kg/sediment)  
STP = 6,58 (mg/l)  
ground = 2,31 (mg/kg ground)

- Substance: isopropyl acetate

DNEL

Systemic effects Long term Workers inhalation = 275 (mg/m<sup>3</sup>)  
Systemic effects Long term Workers dermal = 27 (mg/kg bw/day)  
Systemic effects Long term Consumers inhalation = 168 (mg/m<sup>3</sup>)  
Systemic effects Long term Consumers dermal = 16 (mg/kg bw/day)  
Systemic effects Long term Consumers oral = 16 (mg/kg bw/day)  
Systemic effects Short term Workers inhalation = 558 (mg/m<sup>3</sup>)  
Systemic effects Short term Consumers inhalation = 335 (mg/m<sup>3</sup>)  
Local effects Long term Workers inhalation = 227 (mg/m<sup>3</sup>)  
Local effects Long term Consumers inhalation = 136 (mg/m<sup>3</sup>)

PNEC

Sweet water = 0,22 (mg/l)  
sediment Sweet water = 1,25 (mg/kg/sediment)  
Sea water = 0,022 (mg/l)  
sediment Sea water = 0,125 (mg/kg/sediment)  
STP = 190 (mg/l)  
ground = 0,35 (mg/kg ground)

- Substance: hexamethylene-di-isocyanate

DNEL

Local effects Long term Workers inhalation = 0,035 (mg/m<sup>3</sup>)  
Local effects Short term Workers inhalation = 0,07 (mg/m<sup>3</sup>)

PNEC

Sweet water = 0,049 (mg/l)  
sediment Sweet water = 0,674 (mg/kg/sediment)  
Sea water = 0,005 (mg/l)  
sediment Sea water = 0,067 (mg/kg/sediment)  
STP = 8,42 (mg/l)  
ground = 0,523 (mg/kg ground)

## 8.2. Exposure controls

Appropriate engineering controls:

Given that the use of appropriate technical measures should always take priority over personal protective equipment, ensure good ventilation in the workplace through effective local exhaust ventilation.

When choosing personal protective equipment, seek advice from your chemical suppliers, if necessary.

Personal protective equipment should bear the CE marking attesting to its compliance with applicable standards.

Provide emergency shower with visocular tray.

Exposure levels should be kept as low as possible to avoid significant accumulation in the body. Manage personal protective equipment in







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such a way as to ensure maximum protection (e.g., reducing replacement times).

Public domain:

No specific monitoring foreseen

Individual protection measures:

(a) Eye / face protection

Wear mask

(b) Skin protection

(i) Hand protection

Protect hands with category III work gloves (ref. standard EN 374).

For the final choice of work glove material, the following should be considered: compatibility, degradation, breakthrough time and permeation.

In the case of preparations, the resistance of work gloves to chemical agents must be verified before use as it cannot be predicted. Gloves

have a wear time that depends on the duration and mode of use.

(ii) Other

When handling the pure product wear full protective skin clothing.

(c) Respiratory protection

Use adequate protective respiratory equipment (EN 14387:2008)

(d) Thermal hazards

No hazard to report

Environmental exposure controls:

Emissions from production processes, including those from ventilation equipment should be controlled for compliance with regulations environmental protection.

## SECTION 9. Physical and chemical properties

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

Physical and chemical properties	Value	Determination method
Physical state	viscous liquid	
Colour	colorless	
Odour	of solvent	
Odour threshold	not determined	
Melting point/freezing point	not determined	
Boiling point or initial boiling point and boiling range	not determined	
Flammability	liquido infiammabile	
Lower and upper explosion limit	not determined	
Flash point	23 < T < 60 °C	ASTM D92
Auto-ignition temperature	not determined	
Decomposition temperature	not determined	



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Physical and chemical properties	Value	Determination method
pH	irrelevant	
Kinematic viscosity	> 20,5 mm <sup>2</sup> /sec (40°C)	
Solubility(ies)	not soluble in water	
Water solubility	not soluble in water	
Partition coefficient n-octanol/water (log value)	not determined	
Vapour pressure	not determined	
Density and/or relative density	1,056	
Relative vapour density	not determined	
Particle characteristics	irrelevant	

## 9.2. Other information

Content of VOC ready to use condition: 343,20 g/L

### 9.2.1 Information with regard to physical hazard classes

- a) Explosives
  - i) sensitivity to shock  
Irrelevant
  - ii) effect of heating under confinement  
Irrelevant
  - iii) effect of ignition under confinement  
Irrelevant
  - iv) sensitivity to impact  
Irrelevant
  - v) sensitivity to friction  
Irrelevant
  - vi) thermal stability  
Irrelevant
  - vii) package  
Irrelevant
- b) Flammable gases
  - i) Tci / explosion limits  
Irrelevant
  - ii) fundamental burning velocity  
Irrelevant
- c) Aerosols  
Irrelevant
- d) Oxidising gases



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Irrilevant

e) Gases under pressure  
Irrilevant

f) Flammable liquids  
Irrilevant

g) Flammable solids

i) burning rate, or burning time as regards metal powders  
Irrilevant

ii) statement on whether the wetted zone has been passed  
Irrilevant

h) Self-reactive substances and mixtures

i) decomposition temperature  
Irrilevant

ii) detonation properties  
Irrilevant

iii) deflagration properties  
Irrilevant

iv) effect of heating under confinement  
Irrilevant

v) explosive power, if applicable  
Irrilevant

i) Pyrophoric liquids  
Irrilevant

j) Pyrophoric solids

i) statement on whether spontaneous ignition occurs when poured or within five minutes thereafter, as regards solids in powder form  
Irrilevant

ii) statement on whether pyrophoric properties could change over time  
Irrilevant

k) Self-heating substances and mixtures

i) statement on whether spontaneous ignition occurs and the maximum temperature rise obtained  
Irrilevant

ii) results of screening tests referred to in section 2.11.4.2 of Annex I to Regulation (EC) No 1272/2008, if relevant and available  
Irrilevant

l) Substances and mixtures, which emit flammable gases in contact with water. The following information may be provided

i) identity of the emitted gas, if known  
Irrilevant



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ii) statement on whether the emitted gas ignites spontaneously  
Irrelevant

iii) gas evolution rate  
Irrelevant

m) Oxidising liquids  
Irrelevant

n) Oxidizing solids  
Irrelevant

o) Organic peroxides

i) decomposition temperature  
Irrelevant

ii) detonation properties  
Irrelevant

iii) deflagration properties  
Irrelevant

iv) effect of heating under confinement  
Irrelevant

v) explosive power  
Irrelevant

p) Corrosive to metals

i) metals that are corroded by the substance or mixture  
Irrelevant

ii) corrosion rate and statement on whether it refers to steel or aluminium  
Irrelevant

iii) reference to other sections of the safety data sheet with regard to compatible or incompatible materials  
Irrelevant

q) Desensitised explosives

i) desensitising agent used  
Irrelevant

ii) exothermic decomposition energy  
Irrelevant

iii) corrected burning rate (Ac)  
Irrelevant

iv) explosive properties of the desensitised explosive in that state  
Irrelevant



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## 9.2.2 Other safety characteristics

- a) mechanical sensitivity  
Irrelevant
- b) self-accelerating polymerisation temperature  
Irrelevant
- c) formation of explosible dust/air mixtures  
Irrelevant
- d) acid/alkaline reserve  
Irrelevant
- e) evaporation rate  
Irrelevant
- f) miscibility  
Irrelevant
- g) conductivity  
Irrelevant
- h) corrosiveness  
Irrelevant
- i) gas group  
Irrelevant
- j) redox potential  
Irrelevant
- k) radical formation potential  
Irrelevant
- l) photocatalytic properties  
Irrelevant

## SECTION 10. Stability and reactivity

### 10.1. Reactivity

There are no particular hazards of reaction with other substances under normal conditions of use.  
1-METHYL-2-METHOXYETHYL ACETATE.  
Stable under normal conditions of use and storage.  
With air it can slowly give peroxides that explode with temperature rise.  
HEXAMETHYLENE-1,6-DIISOCYANATE.  
Decomposes at 255°C/491°F. Polymerizes at temperatures above 200°C/392°F

### 10.2. Chemical stability

The product is stable under normal conditions of use and storage.



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## 10.3. Possibility of hazardous reactions

Vapors may form explosive mixtures with air.

1-METHYL-2-METHOXYETHYL ACETATE.

Can react violently with: oxidizing substances, strong acids, alkali metals.

HEXAMETHYLENE-1,6-DIISOCYANATE.

Can form explosive mixtures with: alcohols, bases. Can react violently with: alcohols, amines, strong bases, oxidizing agents, strong acids, water.

## 10.4. Conditions to avoid

Avoid overheating. Avoid accumulation of electrostatic charge. Avoid any source of ignition.

HEXAMETHYLENE-1,6-DIISOCYANATE.

Avoid exposure to: high temperatures, humidity.

Avoid contact with combustible materials. The product could catch fire. heat, open flames, sparks or hot surfaces.

## 10.5. Incompatible materials

1-METHYL-2-METHOXYETHYL ACETATE.

Incompatible with: oxidizing substances, strong acids, alkali metals.

HEXAMETHYLENE-1,6-DIISOCYANATE.

Incompatible with: alcohols, carboxylic acids, amines, strong bases.

## 10.6. Hazardous decomposition products

Gases and vapors potentially harmful to health may be released by thermal decomposition or in case of fire.

HEXAMETHYLENE-1,6-DIISOCYANATE.

Can develop: nitrogen oxides, hydrogen cyanide.

## SECTION 11. Toxicological information

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

ATE(mix) oral = ∞

ATE(mix) dermal = ∞

ATE(mix) inhal = 68,9 mg/l/4 h

(a) acute toxicity: Harmful product: do not inhale

(b) skin corrosion/irritation: If brought into contact with the skin, the product causes significant inflammation



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with erythema, scabs, or edema.

(c) serious eye damage/irritation: If brought into contact with eyes, the product, causes significant irritations which may last for more than 24 hours.

(d) respiratory or skin sensitisation: The product, if brought into contact with skin can cause skin sensitization.

(e) germ cell mutagenicity: based on available data, the classification criteria are not met

(f) carcinogenicity: based on available data, the classification criteria are not met

(g) reproductive toxicity: based on available data, the classification criteria are not met

(h) specific target organ toxicity (STOT) single exposure: If inhaled the product, causes irritations to the respiratory tract.

(i) specific target organ toxicity (STOT) repeated exposure Warning: This product can cause serious irreversible damages to man's health through prolonged or repeated exposure

(j) aspiration hazard: based on available data, the classification criteria are not met

Related to contained substances:

Poly(hexamethylene diisocyanate):

LD50 (rat) Oral (mg/kg body weight) > 2500

LD50 Dermal (rat or rabbit) (mg/kg body weight) > 2000

CL50 Inhalation (rat) vapour/dust/mist/fume (mg/l/4h) or gas (ppmV/4h) = 543

2-methoxy-1-methylethyl acetate:

Routes of exposure: the substance can be absorbed into the body by inhalation of its vapour or aerosols and swallowed.

INHALATION RISK: A harmful contamination of air can be reached quite slowly due to evaporation of the substance at 20 C.

Effects of short-term exposure: the substance is irritating to eyes and respiratory tract. Exposure to high concentrations can result in depression of the central nervous system.

Effects of long-term or repeated: liquid degreasing characteristics.

ACUTE HAZARDS/SYMPTOMS

INHALATION Cough. Vertigo. Drowsiness. Headache. Nausea. Sore throat.

SKIN dry skin.

EYE Redness. Pain.

SWALLOWED, abdominal pain. Diarrhea. A State of unconsciousness.

NOTE insufficient evidence Exists about the effects of the substance on human health, so should be taken maximum precautions.

LD50 (rat) Oral (mg/kg body weight) = 6,19

LD50 Dermal (rat or rabbit) (mg/kg body weight) > 2000

xylene:

LD50 (rat) Oral (mg/kg body weight) = 3600

LD50 Dermal (rat or rabbit) (mg/kg body weight) = 4300

CL50 Inhalation (rat) vapour/dust/mist/fume (mg/l/4h) or gas (ppmV/4h) = 6700

isopropyl acetate:

LD50 (rat) Oral (mg/kg body weight) = 6750

LD50 Dermal (rat or rabbit) (mg/kg body weight) > 20000

CL50 Inhalation (rat) vapour/dust/mist/fume (mg/l/4h) or gas (ppmV/4h) = 63,75

hexamethylene-di-isocyanate:

LD50 (rat) Oral (mg/kg body weight) = 745

LD50 Dermal (rat or rabbit) (mg/kg body weight) > 7000

CL50 Inhalation (rat) vapour/dust/mist/fume (mg/l/4h) or gas (ppmV/4h) = 0,124

## 11.2. Information on other hazards

No data available.



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## SECTION 12. Ecological information

### 12.1. Toxicity

Poly(hexamethylene diisocyanate)

Toxicity to algae Static test EC50 - *Desmodesmus subspicatus* (green alga) - > 1,000 mg/l - 72 h, (OECD Test Guideline 201)

2-methoxy-1-methylethylacetate

Fish toxicity Static test LC50 - *Oncorhynchus mykiss* (Rainbow trout) - 100 - 180 mg/l - 96 hToxicity to daphnia and other aquatic invertebrates, Static test CE50 - *Daphnia magna* (Large water flea) - > 500 mg/l - 48 hToxicity to algae EC50 - *Pseudokirchneriella subcapitata* - > 1,000 mg/l - 96 h

Bacteria toxicity EC10 - activated sludge - &gt; 1,000 mg/l - 30 min

Fish toxicity (chronic toxicity), Continuous Flow Test NOEC - *Oryzias latipes* - 47.5 mg/l - 14 dToxicity to daphnia and other aquatic invertebrates (chronic toxicity), EC50 - *Daphnia magna* (Large water flea) - > 100 mg/l - 21 d

xylene:

Fish toxicity Static test LC50 - *Oncorhynchus mykiss* (Rainbow trout) - 2.60 mg/l - 96 h (xylene (mixture of isomers))Algae toxicity Static test EC50 - *Pseudokirchneriella subcapitata* - 4.36 mg/l - 73 h (xylene (mixture of isomers))

isopropyl acetate

Toxicity to daphnia and other aquatic invertebrates, Static test CE50 - *Artemia salina* (Brine shrimp) - 110 mg/l - 48 h

hexamethylene-1,6-diisocyanate

Toxicity to algae Static test CE50r - *Desmodesmus subspicatus* (green alga) - >77.4 mg/l - 72 h

Use according to good working practices to avoid pollution into the environment.

### 12.2. Persistence and degradability

Poly(hexamethylene diisocyanate)

Aerobic biodegradability - Exposure time 28 d. Result: 1 % - Not readily biodegradable. (OECD Test Guideline 301D).

2-methoxy-1-methylethylacetate

\* Biotic/ Aerobic Biodegradability - Exposure time 28 d Result: 83 % - Readily biodegradable

xylene

It is expected to biodegrade.

isopropyl acetate

Aerobic biodegradability - Exposure time 20 d. Result: 76 % - Readily biodegradable.

BOD/ThBOD ratio 61 %.

hexamethylene-1,6-diisocyanate

Aerobic biodegradability - Exposure time 28 d. Result: 42 % - Not readily biodegradable.

### 12.3. Bioaccumulative potential

Poly(hexamethylene diisocyanate)

No data available





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2-methoxy-1-methylethylacetate  
No data available

xilene  
Has low potential for bioconcentration

isopropyl acetate  
No data available

hexamethylene-1,6-diisocyanate  
No data available

## **12.4. Mobility in soil**

Poly(hexamethylene diisocyanate)  
No data available

2-methoxy-1-methylethylacetate  
No data available

xilene  
Moderate to high mobility on the ground.  
Volatilizes from soil and aqueous surfaces.  
Adsorbs to sediments and suspended solids.  
Exists in vapor phase in the atmosphere

isopropyl acetate  
No data available

hexamethylene-1,6-diisocyanate  
No data available

## **12.5. Results of PBT and vPvB assessment**

Based on the available data, no PBT or vPvB substances are present in accordance with Regulation (EC) 1907/2006, annex XIII

## **12.6. Endocrine disrupting properties**

The mixture does not contain components considered to have endocrine disrupting properties according to Article 57(f) of REACH or Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1 percent or higher.

## **12.7. Other adverse effects**

No adverse effects

## **SECTION 13. Disposal considerations**

### **13.1. Waste treatment methods**

Reuse if possible. Product residues are to be considered special hazardous waste. The hazardousness of wastes that partially contain this



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product must be assessed according to current legislative provisions.  
Disposal must be entrusted to a licensed waste management company in accordance with national and, if applicable, local regulations.  
Waste transportation may be subject to ADR.  
Waste code: 080111 \*, Waste paints and varnishes, containing organic solvents or other hazardous substances.

**CONTAMINATED PACKAGING.**

Contaminated packaging must be sent for recovery or disposal in accordance with national waste management regulations.

Contaminated Packaging Waste Code: 150110 \*, Packaging containing residues of or contaminated with hazardous substances.

## SECTION 14. Transport information

### 14.1. UN number or ID number

ADR/RID/IMDG/ICAO-IATA: 1263

If subject to the following characteristics is ADR exempt:

Combination packagings: per inner packaging 5 L per package 30 Kg

Inner packagings placed in shrink-wrapped or stretch-wrapped trays: per inner packaging 5 L per package 20 Kg



### 14.2. UN proper shipping name

ADR/RID/IMDG: PAINT or PAINT RELATED MATERIAL

ADR/RID/IMDG: PAINT or PAINT RELATED MATERIAL

ICAO-IATA: PAINT or PAINT RELATED MATERIAL

### 14.3. Transport hazard class(es)

ADR/RID/IMDG/ICAO-IATA: Class : 3

ADR/RID/IMDG/ICAO-IATA: Label : 3

ADR: Tunnel restriction code : D/E

ADR/RID/IMDG/ICAO-IATA: Limited quantities : 5 L

IMDG - EmS : F-E, S-E

### 14.4. Packing group

ADR/RID/IMDG/ICAO-IATA: III

### 14.5. Environmental hazards

ADR/RID/ICAO-IATA: Product is not environmentally hazardous

IMDG: Marine polluting agent : Not

### 14.6. Special precautions for user

ADR / RID: HIN - Kemler: 30, Special Provision: 163, 367, 650. Limited Quantity: 5 L, Tunnel Restriction Code: (D/E).

IMDG: EMS: F-E, S-E Limited Quantity: 5 L

IATA: Cargo: Maximum Quantity: 220 L, Instructions I

Pass: Maximum quantity: 60 L, Instructions Packing: 355

Special arrangement: A3, A72.



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The transport must be carried out by authorised vehicles carrying dangerous goods in accordance with the requirements of the current edition of the agreement and the provisions A.D.R national regulations. The transport must be carried out in the original packaging and in packages that are made from materials resistant to the content and not likely to generate with this dangerous reactions. Employees to the loading and unloading of dangerous goods have received proper training on the risks presented by prepared and on possible procedures to be taken in the event of emergency situations

## 14.7. Maritime transport in bulk according to IMO instruments

Information not relevant

## SECTION 15. Regulatory information

### 15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

Seveso category - Directive 2012/18/EU: P5c

Restrictions on the product or substances contained according to Annex XVII Regulation (EC) 1907/2006  
Product  
Section 3 - 40

Contained substances

Point 75

Point 74 DIISOCIANATES

As of August 24, 2023, industrial or professional use is allowed only after receiving appropriate training.

Regulation (EU) 2019/1148 - on the marketing and use of explosives precursors.

Not applicable

Substances on Candidate List (Art. 59 REACH).

Based on available data, the product does not contain SVHC substances in a percentage  $\geq 0.1\%$ .

Substances subject to authorization (Annex XIV REACH)

None

Substances subject to export notification requirements Regulation (EU) 649/2012:

None

Substances subject to the Rotterdam Convention:

None

Substances subject to the Stockholm Convention:

None

REGULATION (EU) No 1357/2014 - waste:

HP4 - Irritant — skin irritation and eye damage

HP5 - Specific Target Organ Toxicity (STOT)/Aspiration Toxicity

HP13 - Sensitising

Substances in the Candidate List (REACH Article 59)

Based on available data, no SVHC substances are present



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## 15.2. Chemical safety assessment

No chemical safety assessment was carried out by the supplier

## SECTION 16. Other information

### 16.1. Other information

Description of the hazard statements exposed to point 3

H317 = May cause an allergic skin reaction.

H332 = Harmful if inhaled.

H335 = May cause respiratory irritation.

H226 = Flammable liquid and vapour.

H336 = May cause drowsiness or dizziness.

H312 = Harmful in contact with skin.

H315 = Causes skin irritation.

H225 = Highly flammable liquid and vapour.

H319 = Causes serious eye irritation.

H331 = Toxic if inhaled.

H334 = May cause allergy or asthma symptoms or breathing difficulties if inhaled

Classification and procedure used to derive the classification for mixtures according to Regulation (EC) 1272/2008 [CLP]:

Classification according to Regulation (EC) Nr. 1272/2008

H226 - Flammable liquid and vapour. Classification procedure: On basis of test data  
H315 - Causes skin irritation. Classification procedure: Calculation method  
H317 - May cause an allergic skin reaction. Classification procedure: Calculation method  
H319 - Causes serious eye irritation. Classification procedure: Calculation method  
H332 - Harmful if inhaled. Classification procedure: Calculation method  
H335 - May cause respiratory irritation. Classification procedure: Calculation method  
H373 - May cause damage to organs through prolonged or repeated exposure. Classification procedure: Calculation method

Regulatory information:

Reg 1907/2006 EC

Reg 1272/2008 EC

Reg 878/2020 EC

Bibliographic data :

SAX 12 Ed Van Nostrand Reinhold

MERCK INDEX 15 Ed

ECHA: European Chemicals Agency (<https://echa.europa.eu/it/information-on-chemicals>)

OSHA: European Agency for Safety and Health at Work

IARC: International Agency for Research on Cancer

IPCS: International Programme on Chemical Safety (Cards)

NIOSH: Registry of toxic effects of chemical substances (1983)

ACGIH: American Conference of Governmental Industrial Hygienists

TOXNET: Toxicology Data Network

WHO: World Health Organization

CheLIST: Chemical Lists Information System

GESTIS: International Limit Value (<https://limitvalue.ifa.dguv.de/>)

Acronyms:

- ACGIH American Conference of Governmental Industrial Hygienists

- ADR Accord Européen Relatif au Transport International des Marchandises Dangereuses par Route (European accord regarding international transport of dangerous goods by land)

- bw body weight

- CLP Classification, Labelling and Packaging

- CSR Chemical Safety Report



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- DMEL Derived Minimal Effect Level
- DNEL Derived No Effect Level
- dw dry weight
- EC Effective Concentration
- IATA International Air Transport Association
- IMDG International Maritime Dangerous Goods
- LC Lethal Concentration
- LD Lethal Dose
- m.w. molecular weight
- PBT Persistent, Bioaccumulative and Toxic
- PNEC Predicted No Effect Concentration
- OECD Organisation / Office for Economic Co-operation and Development
- STEL Short Term Exposure Limit
- SVHC Substance of Very High Concern
- TLV Threshold Limit Value
- TWA Time Weighted Average
- vPvB very Persistent, very Bioaccumulative and toxic
- WGK Wassergefährdungsklasse (Water hazard class)

## NOTICE TO USERS

The information contained in this sheet are based on the knowledge available at the date of the preparation of this sheet.

The user must be aware of the possible risks associated with the use of the product, other than that for which the product is supplied. The sheet does not exonerate the user from knowing and applying all the regulations governing its activities. The set of regulations mentioned is simply to help the user to fulfill its obligations regarding the use of hazardous products.

This sheet does not exonerate the user from other legal obligations than those mentioned and from rules regulating possession and use of the product, since the user is the only responsible.

\*\*\* This sheet supersedes all previous editions.