

PIPERAZINE HEXAHYDRATE FOR SYNTHESIS

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□□ (EU) 2020/878 □□ □□□ REACH □□ (EC) 1907/2006 □□ □□

	GHS05	GHS08
□□□ (CLP)	: □□	
□□·□□ □□ (CLP)	: H314 - □□□ □□ □□□ □ □□□ □□□. H317 - □□□□□ □□ □□□ □□□ □ □□. H334 - □□ □ □□□□□ □□, □□ □□ □□ □□□ □□□ □ □□. H361fd - □□□□□ □□□ □□□ □□□ □□□. □□□ □□□ □□□ □□□.	
□□ □□ □□(CLP)	: P260 - □□·□·□□·□□□·□□·□□□□ □(□) □□□□ □□□. P280 - □□□□, □□□, □□□, □□□□□ □(□) □□□□□. P301+P330+P331 - □□□□ □□ □□□□□. □□□ □□ □□ □□□. P303+P361+P353 - □□(□□ □□□□)□ □□□ □□□ □□ □□□ □□ □□□□. □□□ □□ □□□□ . P305+P351+P338 - □□ □□□□: □ □□ □□ □□□□ □□□□. □□□□ □□□ □□□ □□□□□. □□ □ □□□. P308+P313 - □□□□□ □□□ □□□ □□: □□□ □□·□□□ □□□□.	

2.3. □□ □□

Contains no PBT and/or vPvB substances ≥ 0.1% assessed in accordance with REACH Annex XIII

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3.1. □□□□

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□□	□□□□	%
PIPERAZINE HEXAHYDRATE	CAS □□: 142-63-2 EC □□: 203-808-3	100

□□ 4: □□□□□□

4.1. □□□□ □□

□□ □□ □□	: Call a physician immediately.
□□□□ □□	: □□□ □□□ □□ □□□ □□□□ □□ □□□ □□□□□. Give oxygen or artificial respiration if necessary. If you feel unwell, seek medical advice. If experiencing respiratory symptoms: Call a poison center or a doctor.
□□□ □□□□ □□	: □□□ □□□ □□ □□□□ □□□□□. □□□ □□ □□□□[□□ □□□□□]. □□□ □□ □□□ □□ □□□ □. Call a physician immediately.
□□ □□□□ □□	: □□□□ □□□□□□ □□□□□. □□ □□□□. □ □□ □□ □□□□ □□□□. Call a physician immediately.
□□□□ □□	: □□ □□□□□. If you feel unwell, seek medical advice. Do not induce vomiting. Call a physician immediately.
First-aid measures for first aider	: □□□□ □□□□ □□□ □□ □□ □□□ □□□□ □□□.

4.2. □□ □ □□□□ □□ □□□ □□ □ □□

□□/□□	: □□□ □□ □□□ □□ □□□ □□□.
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□□ □□ □ □□/□□	: □□□□□ □□ □□□ □□□ □ □□. Burns.
□ □□ □ □□/□□	: Serious damage to eyes.
□□ □ □□/□□	: Burns.
□□ □□	: □□ □□□ □□□ □□ □□□□. □□□ □□□ □□□ □□□.

4.3. □□□□□ □□ □ □□□ □□ □□ □□ □□

Treat symptomatically.

PIPERAZINE HEXAHYDRATE FOR SYNTHESIS

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5.1. □□□ □□□

- □□□ : Water spray, dry chemical powder, alcohol-resistant foam, carbon dioxide (CO2). Dry powder. Foam.
- □□□ : Carbon dioxide (CO2). Do not use a heavy water stream.

5.2. □□□□□□□ □□□ □□ □□□

- □□ : No fire hazard.
- □□ : No direct explosion hazard.
- □ □□□ □□□ □□ : Toxic fumes may be released.

5.3. □□□□ □□□□ □ □□□□

- □□ : Fight fire from safe distance and protected location. Do not enter fire area without proper protective equipment, including respiratory protection.
- □□ □ □□ : Do not attempt to take action without suitable protective equipment. □□□ □□□□□. Complete protective clothing.

□□ 6: □□□□□ □□□□

6.1. □□□ □□□□ □□ □□□ □□□□ □ □□□

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- □□ □□ : Wear recommended personal protective equipment.
- □□ : Ventilate spillage area. Evacuate unnecessary personnel. □□ □ □□□ □□□ □□□□. □□/□/□□/□ □□/□□/□□□□ □(□) □□□□ □□□.
- □□ □□ : Do not attempt to take action without suitable protective equipment. □□□ □□ □□□□ □□□□□. □ □□□ □□□ □□ 8: "□□□□ □ □□□□□"□ □□□□□.
- □□ : Stop release. Evacuate unnecessary personnel.

6.2. □□□ □□□□ □□ □□□ □□□□

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6.3. □□ □□ □□ □□

- : Using a clean shovel, put the material in a dry container and cover without compressing it.
- □□ : Mechanically recover the product. Large spills: scoop solid spill into closing containers. Clean up immediately by sweeping or vacuum. □□□ □□□ □□ □□□□□ □□□ □□ □□□ □□.
- □□ □□□□ : Dispose of materials or solid residues at an authorized site.

6.4. □□ □□ □□

For further information refer to section 13.

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7.1. □□□□□□

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- : Ensure good ventilation of the work station. □□ □ □□□ □□□ □□□□. Do not breathe vapours. □ □ □ □□ □□□□ □□□□□. □□ □□ □□□□ □□□ □□ □□□□ □□□ □□□□ □□□□. □□/□/□□/□□□/□□□□ □(□) □□□□ □□□.
- □□ : Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. □□ □□ □ □□□ □□□ □□□□□□. □□□ □□□ □□□ □□□ □□□□ □□□. □ □□□ □□□ □□□ □□□, □□□□ □□□□ □□□. Always wash hands after handling the product.

PIPERAZINE HEXAHYDRATE FOR SYNTHESIS

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7.2. □□□□ □□□□ □□□□ □□ □□ □□

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- : Keep in a cool, well-ventilated place away from heat.

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: Oxidizing agent. Strong acids.

: Store always product in container of same material as original container.

7.3. □□ □□ □□

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□□ 8: □□□□ □□ □□□□□□

8.1. □□ □□ □□

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8.2. □□□□

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Ensure good ventilation of the work station.

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Wear recommended personal protective equipment.

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Chemical goggles or safety glasses

Skin protection

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Wear a mask

□□ □□:

Protective gloves

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□□□□ □□:

Wear appropriate mask

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□□ 9: □□□□□□ □□

9.1. □□□□□ □□□□□□ □□□□ □□ □□

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- : □□

: Colourless or white.

: Crystals.

: 194.23 g/mol

: ammonia like.

: □□□□

: 42 – 44 °C

PIPERAZINE HEXAHYDRATE FOR SYNTHESIS

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□□ □□□□ □□□ □□	: 145 – 156 °C
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□□ □□□	: □□□□
□□ □□□	: 26 vol %
□□□	: 87 °C
□□□□ □□	: □□□□
□□ □□	: □□□□
pH	: 10.5 – 12
pH □□□□ □□	: 5 %
□□(□□□□)	: □□□□
□□□	: □: Completely soluble
Partition coefficient n-octanol/water (Log Kow)	: □□□□
□□□	: Negligible
50°C□□□□ □□□	: □□□□
□□	: 1.92 g/cm³
□□	: □□□□
20°C□□□□ □□ □□ □□	: □□□□
Particle size	: □□□□

9.2. □□ □□ □□□□

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□□ 10: □□□ □□□□

10.1. □□□

The product is non-reactive under normal conditions of use, storage and transport.

10.2. □□□ □□□

Stable under normal conditions.

10.3. □□ □□□ □□□

No dangerous reactions known under normal conditions of use.

10.4. □□□ □□□

Moisture.

10.5. □□□ □□□

Oxidizing agent. Strong bases.

10.6. □□□ □□□□ □□□□

Thermal decomposition generates : Carbon dioxide.

□□ 11: □□□ □□ □□

11.1. □□ (EC) No 1272/2008 □□□□, □□□□ □□□ □□ □□

□□ □□ (□□)	: □□□□ □□
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□□ □□ (□□)	: □□□□ □□
□□ □□□ □□ □□□	: Causes severe skin burns. pH: 10.5 – 12

PIPERAZINE HEXAHYDRATE (142-63-2)	
pH	10.5 – 12
□□ □ □□ □□ □□□	: Assumed to cause serious eye damage pH: 10.5 – 12

PIPERAZINE HEXAHYDRATE FOR SYNTHESIS

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PIPERAZINE HEXAHYDRATE (142-63-2)	
pH	10.5 – 12
□□□ □□ □□ □□□	: □□ □ □□□□□ □□, □□ □□ □□ □□□ □□ □□. □□□□□ □□ □□□ □□□ □□ □□.
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□□ □□□□ □□ (□□ □□)	: □□□□ □□
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PIPERAZINE HEXAHYDRATE FOR SYNTHESIS (142-63-2)	
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PIPERAZINE HEXAHYDRATE (142-63-2)	
□□(□□□)	□□□□

11.2. □□ □□ □□

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□□ 12: □□□ □□□ □□

12.1. □□

□□□ - □□	: Before neutralisation, the product may represent a danger to aquatic organisms.
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12.2. □□□ □□□□

PIPERAZINE HEXAHYDRATE FOR SYNTHESIS (142-63-2)	
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PIPERAZINE HEXAHYDRATE (142-63-2)	
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12.3. □□ □□□

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12.4. □□ □□□

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12.5. PBT □ vPvB □□ □□

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12.6. □□□ □□ □□

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12.7. □□ □□ □□

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□□ 13: □□□ □□□□

13.1. □□□ □□□

□□ □□(□□□)	: Disposal must be done according to official regulations.
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PIPERAZINE HEXAHYDRATE FOR SYNTHESIS

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□□□ □□□	: Dispose of contents/container in accordance with licensed collector's sorting instructions.
□□ □□ □□ □□	: Disposal must be done according to official regulations.
□□/□□ □□ □□□□	: Comply with applicable regulations for solid waste disposal. Disposal must be done according to official regulations.
□□ □□	: Do not re-use empty containers.

□□ 14: □□□ □□□ □□

ADR / IMDG / IATA / ADN / RID □□ □□




14.1. UN □□ □□ ID □□

UN-□□ (ADR)	: UN 2579
UN-□□ (IMDG)	: UN 2579
UN-□□ (IATA)	: UN 2579
UN-□□ (ADN)	: UN 2579
UN-□□ (RID)	: UN 2579

14.2. UN □□ □□□

□□ □□□ (ADR)	: □□□□
□□ □□□ (IMDG)	: PIPERAZINE
□□ □□□ (IATA)	: Piperazine
□□ □□□ (ADN)	: □□□□
□□ □□□ (RID)	: □□□□
□□ □□ □□ (ADR) (ADR)	: UN 2579 □□□□, 8, III, (E)
□□ □□ □□ (IMDG)	: UN 2579 PIPERAZINE, 8, III
□□ □□ □□ (IATA)	: UN 2579 Piperazine, 8, III
□□ □□ □□ (ADN)	: UN 2579 □□□□, 8, III
□□ □□ □□ (RID)	: UN 2579 □□□□, 8, III

14.3. □□□□□ □□□ □□

ADR	
□□□□□ □□□ □□ (ADR)	: 8
□□ □□ (ADR)	: 8
	:
	
IMDG	
□□□□□ □□□ □□ (IMDG)	: 8
□□ □□ (IMDG)	: 8
	:
	
IATA	
□□□□□ □□□ □□ (IATA)	: 8
□□ □□ (IATA)	: 8
	:
	
ADN	
□□□□□ □□□ □□ (ADN)	: 8
□□ □□ (ADN)	: 8

PIPERAZINE HEXAHYDRATE FOR SYNTHESIS

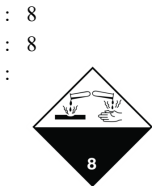
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RID

□□□□□ □□□ □□ (RID)
□□ □□ (RID)



14.4. □□□□

□□ □□ (ADR) : III
□□ □□(IMDG) : III
□□ □□ (IATA) : III
□□ □□(ADN) : III
□□ □□(RID) : III

14.5. □□ □□□

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EmS-No. (□□) : F-A
EmS-No. (□□) : S-B
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14.6. □□□□ □□ □□ □□□□

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□□ □□ (ADR) : C8
□□□(ADR) : 5kg
□□□(ADR) : E1
□□ □□(ADR) : P002, IBC08, LP02, R001
□□ □□ (ADR) : B3
□□ □□ □□ □□ □□(ADR) : MP10
□□□ □□ □ □□ □□□□ □□ (ADR) : T1
□□□ □□ □ □□ □□□□ □□ □□ (ADR) : TP33
□□ □□(ADR) : SGAV, L4BN
□□ □□□□ □□ : AT
□□ □□(ADR) : 3
□□ □□ □□ □□ - □□ □□(ADR) : VC1, VC2, AP7
□□ □□ □□(Kemler □□) : 80
Orange plates (□□□□□□) :



□□ □□ □□ (ADR) : E
EAC □□ : 2X

□□ □□

□□ □□(IMDG) : 5 kg
□□□(IMDG) : E1
□□ □□ (IMDG) : P002, LP02
IBC □□ □□(IMDG) : IBC08
IBC □□ □□ (IMDG) : B3
□□ □□ (IMDG) : T1
□□ □□ □□ (IMDG) : TP33
□□ □□ (IMDG) : A
□□ □□□(IMDG) : SW1, H2
□□(IMDG) : SGG18, SG35

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□□ (EU) 2020/878 □□ □□□□ REACH □□ (EC) 1907/2006 □□ □□

□□□ □□□□ (IMDG) : Colourless, deliquescent crystals, turning dark on exposure to light. Soluble in water. Decomposes when heated and when involved in a fire, evolving highly toxic nitrous fumes. The solution in water is a strong base and is highly corrosive. Reacts violently with acids. Irritating to skin, eyes and mucous membranes.

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PCA □□ □□(IATA) : E1
PCA □□ □□(IATA) : Y845
PCA □□ □□ □□ □□□(IATA) : 5kg
PCA □□ □□(IATA) : 860
PCA □□ □□□(IATA) : 25kg
CAO □□ □□(IATA) : 864
CAO □□ □□□(IATA) : 100kg
□□ □□(IATA) : A803
ERG □□(IATA) : 8L

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□□ □□(ADN) : C8
□□□(ADN) : 5 kg
□□□(ADN) : E1
□□□□(ADN) : T
□□ □□(ADN) : PP, EP
□□ □□/□□□ □□(ADN) : 0

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□□ □□(RID) : C8
□□ □□(RID) : 5kg
□□□(RID) : E1
□□ □□ (RID) : P002, IBC08, LP02, R001
□□ □□ (RID) : B3
□□ □□ □□ □□ □□(RID) : MP10
□□□ □□ □ □□ □□□□ □□ (RID) : T1
□□□ □□ □ □□ □□□□ □□ □□ (RID) : TP33
RID □□□ □□ □□(RID) : SGAV, L4BN
□□ □□(RID) : 3
□□ □□ □□ □□ - □□ □□(RID) : VC1, VC2, AP7
□□ □□□ : CE11
□□□ □□ □□ (RID) : 80

14.7. □□□□□□(IMO) □□ □□ □□ □□ □□

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15.1. □□, □□ □ □□□ □□□□ □□□□ □□ □□□ □□ □□ □□/□□

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REACH □□□ XVII (□□ □□)

REACH □□□ XVII □□□□ □□

REACH □□□ XIV (□□ □□)

REACH □□□ XIV (□□ □□) □□□□ □□

REACH □□ □□ □□ (SVHC)

REACH □□ □□ □□□ □□□ □□□□ □□

PIC □□ (□□□□□□)

PIC □□□ □□□□ □□ (□□ EU 649/2012)

POP □□ (□□□ □□ □□□□)

POP □□□ □□□□ □□ (□□ EU 2019/1021)

PIPERAZINE HEXAHYDRATE FOR SYNTHESIS

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□□ (EU) 2020/878 □□ □□□ REACH □□ (EC) 1907/2006 □□ □□

Ozone Regulation (2024/590)

Not listed on the Ozone Depletion list (Regulation EU 2024/590)

□□□□ □□(428/2009)

Contains no substance subject to the COUNCIL REGULATION (EC) for the control of dual-use items

□□ □□□□ □□ (2019/1148)

□□□ □□□□ □□(□□ □□□□□ □□ □ □□□ □□ □□ EU 2019/1148) □□□ □□ □□□□ □□

□□ □□□□ □□ (273/2004)

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RG 65	
RG 66	

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WGK : WGK 1, □□ □□ □□ □□ (Classification according to AwSV; ID □□ 3206).
□□ □□ □□(12. BImSchV) : □□ □□ □□(12. BImSchV) □□ □□ □□

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SZW-lijst van kankerverwekkende stoffen : □□□ □□□□ □□□□□.
SZW-lijst van mutagene stoffen : □□□ □□□□ □□□□□.
SZW-lijst van reprotoxische stoffen – Borstvoeding : □□□ □□□□ □□□□□.
SZW-lijst van reprotoxische stoffen – Vruchtbaarheid : □□□ □□□□ □□□□□.
SZW-lijst van reprotoxische stoffen – Ontwikkeling : □□□ □□□□ □□□□□.

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Class for fire hazard : □□ III-1
Store unit : 50 liter
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PIPERAZINE HEXAHYDRATE FOR SYNTHESIS

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□□ (EU) 2020/878 □□ □□□ REACH □□ (EC) 1907/2006 □□ □□

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: Act of 25 February 2011 on chemical substances and their mixtures (J. o L. No. 63, item 322 as amended; consolidated text J. o L. 2019, item 1225).
Act of 14 December 2012 on waste (J. o L. 2013, item 322 as amended; consolidated text J. o L. 2020, item 797).
The announcement of Marshal of the Sejm of the Republic of Poland dated 19 October 2016 concerning the consolidated text announcement of the decree on the management of packaging and packaging waste (J. o L. 2016, item 1863 as amended).
Decree of the Minister of Environment of 14 December 2014 on the catalogue of waste (J. o L. 2014, item 1923).
Act of 19 August 2011 on the Carriage of Dangerous Goods (J. o L. 2011 No. 227, item 1367 as amended; consolidated text J. o L. 2020, item 154).
Regulation of the Minister of Family, Labour and Social Policy of 12 June 2018 on the highest permissible concentration and intensity of noxious agents for health at work environment (J. o L. item 1286 as amended).
The announcement of Minister of Health dated 9 September 2016 concerning the consolidated text announcement of the decree of the Minister of Health of 30 December 2004 on health and safety at work related to exposure to chemical agents at work (J. o L. of 16 September 2016, item 1488)
Regulation of the Minister of Health of 2 February 2011 on tests and measurements of the noxious agents for health at work environment (J. o L. No. 33, item 166 as amended).
Regulation of the Minister of Environment of 9 December 2003 on particularly hazardous substances to the environment (J. o L. No. 217, item 2141).
ADR Agreement: Government Statement of 13 March 2023 on the entry into force of amendments to Annexes A and B to the Agreement concerning the International Carriage of Dangerous Goods by Road (ADR), signed in Geneva on 30 September 1957 (J. o. L. 2023, item 891)

15.2. □□ □□ □□□ □□

No chemical safety assessment has been carried out

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ACGIH	American Conference of Government Industrial Hygienists
ADN	European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways
ADR	European Agreement concerning the International Carriage of Dangerous Goods by Road
ATE	Acute Toxicity Estimate
BCF	Bioconcentration factor
BLV	□□ □□ □
BOD	Biochemical oxygen demand (BOD)
CAS □□	□□□□ □□ □□ □□(CAS)
CLP	Classification Labelling Packaging Regulation; Regulation (EC) No 1272/2008
COD	□□□ □□ □□□
CSA	□□ □□ □□□ □□
DMEL	Derived Minimal Effect level
DNEL	□□ □□□ □□
EC □□	□□ □□□ □□
EC50	Median effective concentration
ED	□□□ □□□□
EN	□□ □□
EWG	European waste catalogue

PIPERAZINE HEXAHYDRATE FOR SYNTHESIS

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□□ (EU) 2020/878 □□ □□□ REACH □□ (EC) 1907/2006 □□ □□

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IARC	International Agency for Research on Cancer
IATA	International Air Transport Association
IMDG	International Maritime Dangerous Goods
LC50	Median lethal concentration
LD50	Median lethal dose
LOAEL	Lowest Observed Adverse Effect Level
Log Kow	Partition coefficient n-octanol/water (Log Kow)
Log Pow	Partition coefficient n-octanol/water (Log Pow)
MAK	maximum workplace concentration
NOAEC	No-Observed Adverse Effect Concentration
NOAEL	No-Observed Adverse Effect Level
NOEC	No-Observed Effect Concentration
N.O.S.	Not Otherwise Specified
OECD	Organisation for Economic Co-operation and Development
OEL	□□□ □□ □□
OSHA	Occupational Safety & Health Administration
PBT	Persistent Bioaccumulative Toxic
PNEC	□□ □□□ □□
PPE	□□ □□□
RID	Regulations concerning the International Carriage of Dangerous Goods by Rail
SDS	□□□□□□□□
STP	Sewage treatment plant
TF	□□□ □□
ThOD	Theoretical oxygen demand (ThOD)
TLM	Median Tolerance Limit
TWA	Time Weighted Average
COV	Volatile Organic Compounds
vPvB	Very Persistent and Very Bioaccumulative
UFI	□□ □□ □□□

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H317	□□□□□ □□ □□□ □□□ □ □□.
H334	□□ □ □□□□□ □□, □□ □□ □□ □□□ □□□ □ □□.
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PIPERAZINE HEXAHYDRATE FOR SYNTHESIS

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