



Acyclovir

Safety Data Sheet

according to Regulation (EC) No. 453/2010

Revision date: 15/08/2013

Version: 1.0

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

1.1. Product identifier

Product form	: Substance
Substance name	: Acyclovir
Chemical name	: 2-amino-1,9-dihydro-9-[(2-hydroxyethoxy)methyl]-6H-purin-6-one
CAS No.	: 59277-89-3
Product code	: AC
Formula	: C ₁₈ H ₁₁ N ₅ O ₃
Product group	: Pharmaceutical product

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

1.2.1. Relevant identified uses

Main use category	: Industrial use
Industrial/Professional use spec.	: isolated intermediate
Function or use category	: Antiviral

1.2.2. Uses advised against

No additional information available

1.3. Details of the supplier of the safety data sheet

Hetero drugs Ltd
7-2-A2, Hetero Corporate, Industrial Estate
500082 Hyderabad - INDIA
T 04023774009
drrama@heterodrugs.com - www.heterodrugs.com

1.4. Emergency telephone number

No additional information available

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification according to Regulation (EC) No. 1272/2008 [CLP]

Not classified

Classification according to Directive 67/548/EEC or 1999/45/EC

Carc.Cat.3; R40


Full text of R-phrases: see section 16.

Adverse physicochemical, human health and environmental effects

No additional information available

2.2. Label elements

Labelling according to Regulation (EC) No. 1272/2008 [CLP]

Hazard pictograms (CLP)	:	
		None

CLP Signal word	:	Warning
Hazard statements (CLP)	:	H302 - Harmful if swallowed H332 - Harmful if inhaled
Precautionary statements (CLP)	:	P103 - Read label before use P102 - Keep out of reach of children P201 - Obtain special instructions before use P233 - Keep container tightly closed P403 - Store in a well-ventilated place
EUH phrases	:	EUH210 - Safety data sheet available on request EUH401 - To avoid risks to human health and the environment, comply with the instructions for use

2.3. Other hazards

No additional information available

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SECTION 3: Composition/information on ingredients

3.1. Substances

Name : Acyclovir
CAS No. : 59277-89-3
EC no :
EC index no :

Name	Product identifier	%	Classification according to Directive 67/548/EEC
2-[(2-Amino-6-oxo-1,6-dihydro-9H-purin-9-yl)methoxy]ethyl-N-methyl-L-valinate			Not classified
2-amino-1,7-dihydro-6H-purin-6-one.			Not classified
2-amino-7-[(2-hydroxyethoxy)methyl]-1,7-dihydro-6H-purin-6-one			Not classified
N-[9-[(2-hydroxyethoxy)methyl]-6-oxo-6,9-dihydro-1H-purin-2-yl]acetamide			Not classified
2-[[2-(acetylamino)-6-oxo-1,6-dihydro-9H-purin-9-yl]methoxy]ethyl acetate			Not classified
2-amino-7-[[2-[(2-amino-6-oxo-1,6-dihydro-9H-purin-9-yl)methoxy]ethoxy]methyl]1,7-dihydro-6H-purin-6-one.			Not classified
9,9'-[ethylenebis(oxyethylene)]bis(2-amino-1,9-dihydro-6H-purin-6-one)			Not classified
2,2'-[methylenediimino]bis[9-[(2-hydroxyethoxy)methyl]-1,9-dihydro-6H-purin-6-one]			Not classified
2-Amino-9-[(2-Hydroxyethoxy)methyl]-1,9-dihydro-6H-purin-6-one			Not classified
Acetone	(CAS No.)67-64-1 (EC no)200-662-2 (EC index no)606-001-00-8		F; R11 Xi; R36 R66 R67
Acetic acid	(CAS No.)64-19-7 (EC no)200-580-7 (EC index no)607-002-00-6		R10 C; R35
Methanol	(CAS No.)67-56-1 (EC no)200-659-6 (EC index no)603-001-00-X		F; R11 T; R23/24/25-39/23/24/25

Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
2-[(2-Amino-6-oxo-1,6-dihydro-9H-purin-9-yl)methoxy]ethyl-N-methyl-L-valinate			Not classified
2-amino-1,7-dihydro-6H-purin-6-one.			Not classified
2-amino-7-[(2-hydroxyethoxy)methyl]-1,7-dihydro-6H-purin-6-one			Not classified
N-[9-[(2-hydroxyethoxy)methyl]-6-oxo-6,9-dihydro-1H-purin-2-yl]acetamide			Not classified
2-[[2-(acetylamino)-6-oxo-1,6-dihydro-9H-purin-9-yl]methoxy]ethyl acetate			Not classified
2-amino-7-[[2-[(2-amino-6-oxo-1,6-dihydro-9H-purin-9-yl)methoxy]ethoxy]methyl]1,7-dihydro-6H-purin-6-one.			Not classified
9,9'-[ethylenebis(oxyethylene)]bis(2-amino-1,9-dihydro-6H-purin-6-one)			Not classified
2,2'-[methylenediimino]bis[9-[(2-hydroxyethoxy)methyl]-1,9-dihydro-6H-purin-6-one]			Not classified
2-Amino-9-[(2-Hydroxyethoxy)methyl]-1,9-dihydro-6H-purin-6-one			Not classified
Acetone	(CAS No.)67-64-1 (EC no)200-662-2 (EC index no)606-001-00-8		Flam. Liq. 2, H225 Eye Irrit. 2, H319 STOT SE 3, H336
Acetic acid	(CAS No.)64-19-7 (EC no)200-580-7 (EC index no)607-002-00-6		Not classified
Methanol	(CAS No.)67-56-1 (EC no)200-659-6 (EC index no)603-001-00-X		Flam. Liq. 2, H225 Acute Tox. 3 (Dermal), H311 Acute Tox. 3 (Inhalation), H331 Acute Tox. 3 (Oral), H301 STOT SE 1, H370

Full text of R-, H- and EUH-phrases: see section 16.

3.2. Mixtures

Not applicable

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SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures general	: Flush with water while holding eyelids open for at least 15 minutes. Seek medical attention immediately.
First-aid measures after inhalation	: Allow the victim to rest in a well ventilated area. Seek immediate Medical attention.
First-aid measures after skin contact	: When symptoms occur: rinse immediately with plenty of water. Remove contaminated clothing. Flush area with large amount of water. USE SOAP. seek medical attention.
First-aid measures after eye contact	: Flush with water while holding eyelids open for at least 15 minutes. Seek medical attention immediately.
First-aid measures after ingestion	: Rinse mouth with water-Immediately after ingestion:give lots of water to drink.

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

Symptoms/injuries	: Flush with water while holding eyelids open for at least 15 minutes. Seek medical attention immediately.
Symptoms/injuries after inhalation	: Remove to fresh air and keep patient at rest. Seek medical attention immediately.
Symptoms/injuries after skin contact	: Remove contaminated clothing. Flush area with large amounts of water. Use soap. Seek medical attention.
Symptoms/injuries after eye contact	: Flush with water while holding eyelids open for at least 15 minutes. Seek medical attention immediately.
Symptoms/injuries after ingestion	: Never give anything by mouth to an unconscious person. Wash out mouth with water. Do not induce vomiting unless directed by medical personnel. Seek medical attention immediately.
Symptoms/injuries upon intravenous administration	: For information on potential signs and symptoms of exposure. See section 2-Hazards identification and/or section 11-Toxicological information.

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

No additional information available

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media : Use carbon dioxide, dry chemical.

5.2. Special hazards arising from the substance or mixture

Fire hazard	: Flammable with air within explosion limits Indirect fire hazard may be ignited by sparks Gas/vapour spreads at floor level:ignition hazard.
Explosion hazard	: Not expected for the product, although the packaging is combustible.
Reactivity	: Product is not explosive.

5.3. Advice for firefighters

No additional information available

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

No additional information available

6.1.2. For emergency responders

No additional information available

6.2. Environmental precautions

For large spills, take precautions to prevent entry into waterways, sewers, or surface drainage systems.

6.3. Methods and material for containment and cleaning up

No additional information available

6.4. Reference to other sections

No additional information available

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling	: Do not eat, drink or smoke when using this product.
Handling temperature	: 25 °C

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions	: Pack in air tight containers. Store the material at temperature below 25°C.
Storage temperature	: 25 °C
Storage area	: Room.
Special rules on packaging	: Triple laminated aluminium package.

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7.3. Specific end use(s)

Fabric Refresher.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

No additional information available

8.2. Exposure controls

Appropriate engineering controls

: Engineering controls should be used as the primary means to control exposures. General room ventilation is adequate unless the process generates dust, mist or fumes. Keep airborne contamination levels below the exposure limites listed above in this section.

Personal protective equipment

: Wear gas mask with filter type A if conc. in air >. Safety glasses. Respiratory protection of the dependent type. Protective goggles. Protective clothing. On heating: heatproof clothing. Gloves.



Materials for protective clothing

: Chloroprene rubber nitrile rubber.

Hand protection

: Gloves.

Eye protection

: Safety glasses.

Skin and body protection

: Protective clothing.

Respiratory protection

: Gas mask with filter type A.

Other information

: The present safety data sheet is consistent with the specific conditions relied on to justify the registration of the substance as isolated intermediate.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state

: Solid

Appearance

: White or almost white, crystalline powder.

Molecular mass

: 225 g/mol

Colour

: White.

Odour

: None.

Odour threshold

: No data available

pH

: No data available

Melting point

: No data available

Solidification point

: No data available

Boiling point

: No data available

Flash point

: No data available

Relative evaporation rate (butylacetate=1)

: No data available

Flammability (solid, gas)

: No data available

Explosive limits

: No data available

Vapour pressure

: No data available

Relative vapour density at 20 °C

: No data available

Relative density

: No data available

Solubility

: Slightly soluble in water, freely soluble in dimethyl sulfoxide and very slightly soluble in ethanol(96%). It dissolves in dilute solutions of mineral acids and alkali hydroxides.

Log Pow

: No data available

Log Kow

: No data available

Self ignition temperature

: No data available

Decomposition temperature

: No data available

Viscosity, kinematic

: No data available

Viscosity, dynamic

: No data available

Explosive properties

: No data available

Oxidising properties

: No data available

9.2. Other information

No additional information available

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SECTION 10: Stability and reactivity

10.1. Reactivity

Product is not explosive.

10.2. Chemical stability

Stable under normal conditions of use.

10.3. Possibility of hazardous reactions

No additional information available

10.4. Conditions to avoid

No additional information available

10.5. Incompatible materials

As a precautionary measure. Keep away from strong oxidizers.

10.6. Hazardous decomposition products

No additional information available

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity	: Not classified
Skin corrosion/irritation	: Not classified
Serious eye damage/irritation	: Not classified
Respiratory or skin sensitisation	: Not classified
Germ cell mutagenicity	: Not classified
Carcinogenicity	: Not classified
Reproductive toxicity	: Not classified
Specific target organ toxicity (single exposure)	: Not classified
Specific target organ toxicity (repeated exposure)	: Not classified
Aspiration hazard	: Not classified
Other information	: Information on Effects: refer to section 4.

SECTION 12: Ecological information

12.1. Toxicity

Ecology - general	: Slightly soluble in water, freely soluble in dimethyl sulfoxide and very slightly soluble in ethanol(96%). It dissolves in dilute solutions of mineral acids and alkali hydroxides.
Ecology - air	: Not dangerous for the ozone layer(1999/45/EC).

12.2. Persistence and degradability

Acyclovir(59277-89-3)	
Persistence and degradability	% biodegradation.

12.3. Bioaccumulative potential

Acyclovir(59277-89-3)	
Bioaccumulative potential	The substance has low potential for bioaccumulation.

12.4. Mobility in soil

Acyclovir(59277-89-3)	
Ecology - soil	The substance has moderate mobility in groundwater. The substance has moderate mobility in soil.

12.5. Results of PBT and vPvB assessment

No additional information available

12.6. Other adverse effects

No additional information available

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Additional information	: Wash clothing and equipment after handling.
Ecology - waste materials	: Take up liquid spil into absorbent material-Scoop absorbed substance into closing containers.

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SECTION 14: Transport information

No dangerous good in sense of transport regulations.

SECTION 15: Regulatory information

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

15.1.1. EU-Regulations

Contains no REACH candidate substance

EURAL code : 20 01 32

CESIO recommendations : This surfactant complies with the biodegradability criteria as laid down in Regulation (EC) No.648/2004 on detergents. Data to support this assertion are held at the disposal of the competent authorities of the Member States and will be made available to them, at their direct request or at the request of a detergent manufacturer.

15.1.2. National regulations

No additional information available

15.2. Chemical safety assessment

No additional information available

SECTION 16: Other information

Training advice : Normal use of this product shall imply use in accordance with the instructions on the packaging.

Full text of R-, H- and EUH-phrases:

Acute Tox. 3 (Dermal)	Acute toxicity (dermal) Category 3
Acute Tox. 3 (Inhalation)	Acute toxicity (inhalation) Category 3
Acute Tox. 3 (Oral)	Acute toxicity (oral) Category 3
Eye Irrit. 2	Serious eye damage/eye irritation Category 2
Flam. Liq. 2	Flammable liquids Category 2
STOT SE 1	Specific target organ toxicity (single exposure) Category 1
STOT SE 3	Specific target organ toxicity (single exposure) Category 3
H225	Highly flammable liquid and vapour
H301	Toxic if swallowed
H311	Toxic in contact with skin
H319	Causes serious eye irritation
H331	Toxic if inhaled
H336	May cause drowsiness or dizziness
H370	Causes damage to organs
R10	Flammable.
R11	Highly flammable.
R23/24/25	Toxic by inhalation, in contact with skin and if swallowed.
R35	Causes severe burns.
R36	Irritating to eyes.
R39/23/24/25	Toxic: danger of very serious irreversible effects through inhalation, in contact with skin and if swallowed.
R40	Limited evidence of a carcinogenic effect
R66	Repeated exposure may cause skin dryness or cracking.
R67	Vapours may cause drowsiness and dizziness.

SDS EU (REACH Annex II)

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.