

## N-(Cyclohexylthio)phthalimide

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

#### 1.1 Product identifier

Trade name: N-(Cyclohexylthio)phthalimide  
REACH registration No.: 01-2119488204-37-0004

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

General use: Chemical basic material.  
For industrial purposes only.

Identified uses:  
1. Manufacture, processing and distribution of substances and mixtures  
2. Industrial use for rubber and plastic industry  
3. Industrial use in tires industrial

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

Company name: NetSun EU B.V.  
Street/POB-No.: Blaak 40, Fifth Floor  
State/city/postal code: NL-3011 TA Rotterdam  
Telephone: +31 (0)10 842 1148  
Telefax: +31 (0)10 840 4118  
Dept. responsible for information: REACH Department,  
Telephone: +31 (0)10 842 1148, E-mail reachcompliance@netsun.com

#### 1.4 Emergency telephone number

GIZ-Nord, Germany, Telephone: +49 (0)551-19240

### SECTION 2: Hazards identification

#### 2.1 Classification of the substance or mixture

Classification according to EC regulation 1272/2008 (CLP):

Aquatic Acute 1; H400 Very toxic to aquatic life.  
Skin Sens. 1; H317 May cause an allergic skin reaction.  
Aquatic Chronic1:410

Classification according to directive 1999/45/EC(DPD):

Classification : R43  
N;R50/53

Human health hazards : May cause sensitization by skin contact.

Environmental hazards : Very toxic to aquatic organisms,may cause long-term adverse  
Effects in the aquatic environment.

#### 2.2 Label elements

Labelling (CLP)



Signal word

**Warning**

Hazard Statements H317 May cause an allergic skin reaction.  
H400 Very toxic to aquatic life.

Safety precautions P261 Avoid breathing dust.  
P280 Wear protective gloves/protective clothing/eye protection/face protection.  
P333+P313 If skin irritation or rash occurs: Get medical advice/attention.  
P501 Dispose of contents/container to hazardous or special waste collection point.

Labelling (67/548/EEC or 1999/45/EC)



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R phrase(s): not applicable

S phrase(s): not applicable

### 2.3 Other hazards

No risks worthy of mention.

## SECTION 3: Composition/ information on ingredients

### 3.1 Substances

Chemical characterization (substance):

C<sub>14</sub> H<sub>15</sub> N O<sub>2</sub> S >= 97%

CAS-Number: 17796-82-6

EINECS-Number: 241-774-1

## SECTION 4: First aid measures

### 4.1 Description of first aid measures

After inhalation: Provide fresh air. Seek medical treatment in case of troubles.

In case of skin contact: Remove residues with water. Take off immediately all contaminated clothing. In case of skin reactions, consult a physician.

After eye contact: Immediately flush eyes with plenty of flowing water for 10 to 15 minutes holding eyelids apart. Subsequently consult an ophthalmologist.

After swallowing: Drink large quantities of water. Seek medical attention.

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

After contact with skin:

Specific symptoms in animal studies (Rat): mild irritant (OECD 404/EU B.4) After eye

contact: Specific symptoms in animal studies (Rabbit): moderate irritant (OECD 405/EU B.5)

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

No special measures are required.

## SECTION 5: Firefighting measures

### 5.1 Extinguishing media

Suitable extinguishing media:

Water fog, foam, extinguishing powder, carbon dioxide.

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

Combustible. In case of fire may be liberated: Nitrogen oxides (NO<sub>x</sub>), sulphur oxides, carbon monoxide and carbon dioxide.

### 5.3 Advice for firefighters

Special protective equipment for firefighters:

Wear self-contained breathing apparatus. Wear suitable protective clothing.

Additional information: Hazchem-Code: 2Z

Use water spray jet to knock down vapours. Do not allow fire water to penetrate into surface or ground water.



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### SECTION 6: Accidental release measures

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

Avoid contact with the substance. Avoid generation of dust. Do not breathe dust. Ensure adequate ventilation, especially in confined areas.

#### 6.2 Environmental precautions

Do not allow to penetrate into soil, waterbodies or drains.

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

Collect dry and place in appropriate containers for disposal, cleaning.

#### 6.4 Reference to other sections

not required

### SECTION 7: Handling and storage

#### 7.1 Precautions for safe handling

Advices on safe handling: Avoid contact with skin, eyes, and clothing. Avoid generation of dust. In case of dust: Provide adequate ventilation, and local exhaust as needed.

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

Requirements for storerooms and containers:

Store container tightly closed in a dry and cool place.

Storage class: 11 = Combustible solids

#### 7.3 Specific end use(s)

No data available

### SECTION 8: Exposure controls/personal protection

#### 8.1 Control parameters

Additional information: Contains no substances with occupational exposure limit values.

DNEL  
DNEL short term, workers, inhalative: 1,505 mg/m<sup>3</sup>  
DNEL Long Term, workers, dermal: 0,5 mg/kg bw/d  
DNEL Long Term, workers, inhalative: 0,301 mg/m<sup>3</sup>

PNEC  
PNEC Water (freshwater): 0,00093 mg/L  
PNEC Water (marine water): 0,000186 mg/L  
PNEC Water (intermittent release): 0,0039 mg/L  
PNEC Sediment (freshwater): 0,0105 mg/kg  
PNEC Sediment (marine water): 0,0021 mg/kg  
PNEC Soil: 0,0119 mg/kg w  
PNEC Sewage treatment plant: 0,0132 mg/L

#### 8.2 Exposure controls

In the case of the formation of dust: Withdraw by suction.

#### Occupational exposure controls

Respiratory protection: In case of dust: Particulates filter P2 according to EN 143.

Hand protection: Protective gloves according to EN 374.  
Glove material: Nitrile rubber  
Breakthrough time: >480 min.  
Observe glove manufacturer's instructions concerning penetrability and breakthrough time.

Eye protection: Tightly sealed safety glasses according to EN 166.

Body protection: Wear suitable protective clothing.



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General protection and hygiene measures:

Take off immediately all contaminated clothing.  
After work, wash hands and face.

### SECTION 9: Physical and chemical properties

#### 9.1 information on basic physical and chemical properties

Physical state:	solid (powder, Pellets)
Colour	white
Odour:	weak
Boiling temperature / boiling range	400 °C (calculated)
Melting point / melting range	91 - 95 °C (1013 hPa)
Flash point / flash point range:	172 °C
Autoflammability:	This product is non-flammable.
Explosive properties:	Product is not explosive.
Vapour pressure:	at 25 °C: negligible
Density:	at 25 °C: 1,3 g/cm <sup>3</sup>
Water solubility:	at 20 °C: 12,4 mg/L
Partition coefficient n-octanol /water:	at 25 °C: 3,19 log P(o/w) An appreciable bioaccumulation potential is to be expected (log P(o/w) >3).
Thermal decomposition:	> 196 °C

#### 9.2 Other information

Molecular weight: 261,34 g/mol

### SECTION 10: Stability and reactivity

#### 10.1 Reactivity

No data available

#### 10.2 Chemical stability

Product is stable under normal conditions.

#### 10.3 Possibility of hazardous reactions

No data available

#### 10.4 Conditions to avoid

No data available

#### 10.5 Incompatible materials

Strong oxidizing agents.

#### 10.6 Hazardous decomposition products

In case of fire may be liberated: Nitrogen oxides (NO<sub>x</sub>), sulphur oxides, carbon monoxide and carbon dioxide.

Thermal decomposition: > 196 °C

### SECTION 11: Toxicological information

#### 11.1 Information on toxicological effects



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Acute toxicity: LD50 Rat, oral: 2600 mg/kg bw (OECD 423)  
LD50 Rabbit, dermal: 5010 mg/kg bw  
NOAEL Rat, oral, subchronic toxicity: 300 ppm/30 d  
NOAEL Rat, inhalative, subchronic toxicity: > 536 mg/m<sup>3</sup>/28 d

In case of skin contact: May cause irritations. May cause an allergic skin reaction.

After eye contact: May cause irritations.

### Symptoms

After contact with skin:  
Specific symptoms in animal studies (Rat): mild irritant (OECD 404/EU B.4) After eye contact: Specific symptoms in animal studies (Rabbit): moderate irritant (OECD 405/EU B.5)

### General remarks

Mutagenicity:  
Bacterial mutagenicity: negative (in-vitro OECD 471)  
Gene-mutations mammalian cells (hamster): negative (in-vitro, OECD 476/EU B.17)  
Gene-mutations mammalian cells (Rat): negative (in-vivo, OECD 486)  
Chromosomal aberrations (Rat): negative (in-vivo, OECD 475)

Carcinogenicity:  
NOAEL (Rat, male): 500 mg/kg/d  
NOAEL (Rat, female): 500 mg/kg/d

Reproductive toxicity:  
NOEL (Rabbit, maternal toxicity): 30 mg/kg/7-19d  
Toxicity for reproduction:  
NOEL (Rat, maternal toxicity): 150 mg/kg/288d

## SECTION 12: Ecological information

### 12.1 Toxicity

Aquatic toxicity: Very toxic to aquatic life.  
Short term, Fish toxicity:  
- LC50 (Oncorhynchus mykiss): 0,41 mg/L/96 h  
- LC50 (Pimephales promelas (fathead minnow)): 0,39 mg/L/14 d  
Short term, Invertebrate toxicity:  
- EC50 (Daphnia magna (Big water flea)): 1,21 mg/L/48h (EU Method C.2)  
- NOEC (Daphnia magna (Big water flea)): <0,82 mg/L/48h (EU Method C.2)  
Long Term, Invertebrate toxicity:  
- EC50 (Daphnia magna (Big water flea)): >2,0 mg/L/21d (OECD 211)  
Short term, Algae toxicity:  
- ErC50 Desmodesmus subspicatus (green algae): (EU Method C.3) >0,093 mg/L/72h

Water Hazard Class: 2 = hazardous to water

### 12.2. Persistence and degradability

Further details: Abiotic degradation:  
- Hydrolysis: 99,7 %/7 d (25 °C, pH7) (Monsanto ABC-32456)  
- Photolysis in light: not to be expected  
- Photolysis in air: half-life time 2,8 h, calculated (SRCAOPWinv1.91) (US EPA, 2004)  
- Photolysis in Water: No data available  
- Photolysis in soil: No data available

Biodegradation: Product is not readily biodegradable.  
- Water: 35 %/28 d (comparable to C.4E – Closed Bottle Test, Directive 92/69/EEC)  
- Sediment: No data available  
- Soil: No data available



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### 12.3 Bioaccumulative potential

Bioconcentration factor (BCF): 130 (calculated, US EPA, 2004)

Bioconcentration factor (BCF): 140,3 L/kg (calculated, BCFBAF v3.00)

Partition coefficient n-octanol /water:

at 25 °C: 3,19 log P(o/w)

An appreciable bioaccumulation potential is to be expected (log P(o/w) >3).

### 12.4 Mobility in soil

adsorption coefficient KOC: 483 L/kg

### 12.5 Results of PBT and vPvB assessment

This substance does not meet the PBT/vPvB criteria of REACH, annex XIII.

### 12.6 Other adverse effects

General information: Do not allow to enter into ground-water, surface water or drains.

## SECTION 13: Disposal considerations

### 13.1 Waste treatment methods

#### Product

Waste key number 07 01 99 = Wastes from the manufacture, formulation, supply and use (MFSU) of basic organic chemicals  
MFSU = manufacture, formulation, supply and use

Recommendation: Special waste. Dispose of waste according to applicable legislation.

#### Contaminated packaging

Recommendation: Dispose of waste according to applicable legislation. Handle contaminated packages in the same way as the substance itself.  
Non-contaminated packages may be recycled.

## SECTION 14: Transport information

### 14.1 UN number

ADR/RID, IMDG, IATA: 3077

### 14.2 UN proper shipping name

ADR/RID, IMDG, IATA: UN 3077, ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.  
(N-(Cyclohexylthio)phthalimide)

### 14.3 Transport hazard class(es)

ADR/RID: Class 9, Code: M7

IMDG: Class 9, Code -

IATA: Class 9

### 14.4 Packing group

ADR/RID, IMDG, IATA: III

### 14.5 Environmental hazards

Marine Pollutant Yes

### 14.6 Special precautions for user

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### Land transport (ADR/RID)

Warning board:	ADR/RID: Kemmler-number 90, UN number 3077
Hazard label	9
Special provisions	274 335 601
Limited quantities	5 kg
EQ	E1
Contaminated packaging: Instructions	P002 IBC08 LP02 R001
Contaminated packaging: Special provisions	PP12 B3
Special provisions for packing together	MP10
Portable tanks: Instructions	T1 BK1 BK2
Portable tanks: Special provisions	TP33
Tank coding	SGAV LGBV
Tunnel restriction code:	E



### Sea transport (IMDG)

EmS:	F-A, S-F
Special provisions	179, 274, 335, 909
Limited quantities	5 kg
EQ	E1
Contaminated packaging: Instructions	P002, LP02
Contaminated packaging: Provisions	PP12
IBC: Instructions	IBC08
IBC: Provisions	B3
Tank instructions: IMO	-
Tank instructions: UN	T1, BK2
Tank instructions Provisions	TP33
Stowage and segregation	Category A.
Properties and observations	-

### Air transport (IATA)

Hazard	Miscellaneous
EQ	E1
Passenger Ltd.Qty.:	Pack.Instr. Y956 - Max.Qty. 30 kg G
Passenger:	Pack.Instr. 956 - Max.Qty. 400 kg
Cargo:	Pack.Instr. 956 - Max.Qty. 400 kg
Special Provisioning	A97 A158 A179
ERG	9L

### 14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

No data available

## SECTION 15: Regulatory information

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

#### National regulations - Great Britain

Hazchem-Code: 2Z

#### National regulations - Germany

Storage class: 11 = Combustible solids

Water Hazard Class: 2 = hazardous to water

Informations on working limitations:

Observe employment restrictions concerning young persons.  
Observe employment restrictions for expectant or nursing mothers.



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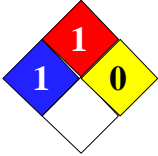
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### National regulations - USA

Hazard rating systems



TSCA Inventory: listed  
TSCA HPVC: not listed  
NFPA Hazard Rating:  
Health: 1 (Slight)  
Fire: 1 (Slight)  
Reactivity: 0 (Minimal)  
HMIS Version III Rating:  
Health: 1 (Slight)  
Flammability: 1 (Slight)  
Physical Hazard: 0 (Minimal)  
Personal Protection: X = Consult your supervisor

HEALTH	1
FLAMMABILITY	1
PHYSICAL HAZARD	0
	X

### 15.2 Chemical Safety Assessment

For this substance a chemical safety assessment has been carried out.

## SECTION 16: Other information

### Group that issues data sheet

Contact person: see chapter 1, department responsible for information.

The information in this data sheet has been established to our best knowledge and was up-to-date at time of revision. It does not represent a guarantee for the properties of the product described in terms of the legal warranty regulations.