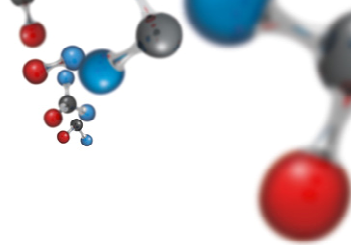


SAFETY DATA SHEET

N-PHENYLCYCLOHEXYLAMINE



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

1.1 Product identifier

Chemical name: **N-Cyclohexylaniline**
Registration no.: -
Index number: -
ES (EINECS) number: **217-344-4**
CAS number: **1821-36-9**
Other names of the substance: **N-phenylcyclohexylamine**

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

Uses of the substance: **N-phenylcyclohexylamine is used as chemical intermediate.**
Uses advised against: **Not specified.**

1.3 Details of the supplier of the safety data sheet

Name: **BorsodChem MCHZ, s.r.o.**
Name or business name: **BorsodChem MCHZ, s.r.o.**
Place of business or headquarters: **Chemická 2039/1, 709 00 Ostrava – Mariánské Hory, Czech Republic**
Identification number: **26019388**
Telephone: **+420 596 641 111**
Fax: **+420 596 642 040**
E-mail of the technically competent person responsible for the safety data sheet:
zsvobodova@bc-mchz.cz

1.4 Emergency telephone number

Company telephone number: +420 596 643 221 or 596 620 794 non-stop
24-hours emergency contact CHEMTREC: 001-703-527-3887, company code CCN 206 072
The National Poisons Information Service (NPIS), City Hospital, Birmingham, B18 7QH, UK
Tel: +44 121 507 4123, fax: +44 121 507 5580, e-mail: allistervale@npis.org, www.npis.org
National Capital Poison Center, 3201 New Mexico Ave, Suite 310 Washington, DC 20016
Emergency Line: 1-800-222-1222, fax: 202-362-8377, e-mail: pc@poison.org, www.poison.org

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

According to Regulation (EC) no. 1272/2008:
Acute Tox. 4; H302 Harmful if swallowed.
Acute Tox. 4; H312 Harmful in contact with skin.
Acute Tox. 4; H332 Harmful if inhaled.
Skin Irrit. 2; H315 Causes skin irritation.
Eye Irrit. 2; H319 Causes serious eye irritation.
STOT SE 3; H335 May cause respiratory irritation.

The most important human health adverse effects during use of the substance or preparation:
Harmful if swallowed, in contact with skin or if inhaled. Irritating to eyes, respiratory system and skin.

SAFETY DATA SHEET

N-PHENYLCYCLOHEXYLAMINE

The most important adverse effects to environment during use of the substance/preparation: -

2.2 Label elements

According to Regulation (EC) no. 1272/2008:

Symbol:



Signal word: WARNING

H phrases:

H302+H312+H332 Harmful if swallowed, in contact with skin or if inhaled.

H315 Causes skin irritation.

H319 Causes serious eye irritation.

H335 May cause respiratory irritation.

P phrases:

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

P301+P312 IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell.

P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

2.3 Other hazards

The substance is not identified as persistent, bioaccumulative and toxic (PBT) or very persistent, very bioaccumulative (vPvB) under Annex XIII of Regulation 1907/2006/ES.

SECTION 3: Composition/information on ingredients

3.1 Substances

Chemical name	N-Cyclohexylaniline
Index number	-
EC No.	217-344-4
CAS No.	1821-36-9
Substance content (% w.)	min. 98.00
Synonyms	N-phenylcyclohexylamine

Impurities: < 1 % w., CMR impurities < 0,1 % w.

3.2 Mixtures

This is a chemical substance.

SAFETY DATA SHEET

N-PHENYLCYCLOHEXYLAMINE

SECTION 4: First aid measures

4.1 Description of first aid measures

Inhalation: Remove the victim quickly and considering own safety to fresh air, do not let the victim walk! Depending on situation, rinsing of oral cavity and nose, if necessary, with water is recommended. If the victim's clothing is contaminated, change the victim and protect him against cold. Ensure breathing. Call a physician!

Skin: Remove contaminated clothing immediately; before washing or during washing, remove any rings, watches, bracelet that are in places of contact of the substance with skin. Rinse affected areas with stream of lukewarm water, if possible, for 10 to 30 minutes; do not use a brush, soap or neutralising agents! Cover burned areas of skin with a sterile dressing, do not use any ointments or other medical and pharmaceutical products. Cover the victim to protect him against cold. Depending on situation, call the rescue service or ensure medical attention.

Eyes: Rinse eyes immediately under running water, open eyelids (even by force); if the victim wears contact lenses, remove them immediately. Do never neutralise! Rinse for 10 to 30 minutes from the inner to the outer ocular angle to prevent running of water in the other eye. Ensure as soon as possible medical treatment by an expert, if possible; the victim must get medical attention even in case of small injury.

Ingestion: DO NOT INDUCE VOMITING – higher risk of harm to digestive tract!!! Risk of perforation of oesophagus and stomach!

Rinse mouth immediately with water and give to drink 2-5 dl of cold water to attenuate thermal effect of the caustic (*due to almost immediate effect to mucous membranes, it is suitable to offer immediately tap water than loose time by looking for chilled liquid – each minute of delay causes irreversible harm to mucous membranes! Soda water or mineral waters are not recommended, as they may release gaseous carbon dioxide. It is not recommended to consume a lot of liquid, as it could induce vomiting and possible aspiration of the caustic in lungs*). Do not force the victim to drink, especially if he/she feels pain in mouth or throat. In this case, make the victim rinse his/her mouth. DO NOT ADMINISTER ACTIVATED CARBON! (*blackening will make examination of the mucous membranes more difficult and activated charcoal has not positive effect in case of acids and lyes*). Do not give to eat. Do not administer anything by mouth if the victim is unconscious or has convulsions. Get immediate medical attention!

4.2 Most important symptoms and effects, both acute and delayed

Vapours severely irritate eyes, airways and skin and cause burning. Contact with the liquid causes severe burns to eyes and skin. The liquid is absorbed by skin.

4.3 Indication of any immediate medical attention and special treatment needed

Symptomatic treatment. In case of contact with eyes, immediately rinse carefully with water.

SECTION 5: Firefighting measures

5.1 Extinguishing media

**Suitable extinguishing media: big fire – foam for polar liquids, water mist or water spray
small fire – water mist or water spray, dry powder, CO₂**

Unsuitable extinguishing media: not specified

5.2 Special hazards arising from the substance or mixture: **Flammable liquid. Possibility of release of carbon monoxide and nitrogen oxides.**

5.3 Advice for firefighters: **Self-contained breathing apparatus, special protective clothing!**

SAFETY DATA SHEET

N-PHENYLCYCLOHEXYLAMINE

SECTION 6: Accidental release measures

- 6.1 Personal precautions, protective equipment and emergency procedures: **Protection of air ways, protection of non-protected body parts, protection of eyes. Measure concentration of phenylcyclohexanamine (hereinafter only PCHA) in the environment, provide sufficient ventilation.**
- 6.2 Environmental precautions: **Prevent contamination of soil and water, check concentration of PCHA in the environment in the vicinity of accident.**
- 6.3 Methods and material for containment and cleaning up: **Cover with an absorbent material and sweep up into a waste container. For methods of disposal see Section 13.**
- 6.4 Reference to other sections: **Refer to section 10 and 13.**

SECTION 7: Handling and storage

- 7.1 Precautions for safe handling: **Delivered in or truck tanks or in steel barrels or in IBC containers. Ventilation provided during emptying.**
- 7.2 Conditions for safe storage, including any incompatibilities:
Store in easily ventilated rooms in original packages or in steel tanks. The highest allowable storing temperature is 100 °C. Do not store together with foodstuffs, strong oxidising agents and concentrated strong acids.
- 7.3 Specific end use(s): **Not specified.**

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Czech republic: Not established.
EC countries (2000/39/EC): Not established.

8.1.1 DNEL (Derived No Effect Level) for exposure of workers: **not established**

8.2 Exposure controls

When used in a closed circuit or with sufficient vapour exhaust, it is necessary to use standard personal protective equipment. When used in an open facility and insufficient vapour exhaust, it is necessary to use respiratory protection.

Engineering controls: **Ensure ventilation. Check measurement of PCHA concentration in the working environment.**

Respiratory protection: **protective mask or half mask with filter (EN 149) against organic vapours - type A/P2**

Hand protection: **protective gloves (e.g. EN 374)**

Eye protection: **protective goggles or face shield (e.g. EN 166)**

Skin protection: **protective clothing**

Other data: **Do not eat, drink and smoke during work. Wash your hands with hot water and soap after work, apply suitable reparative preparations.**

Environmental exposure controls:

Use in a closed circuit, waste gases burnt in a fire crack or cleaned by adsorption (activated carbon), wastewater treated biologically.

SAFETY DATA SHEET

N-PHENYLCYCLOHEXYLAMINE

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Appearance:	yellowish to brown liquid
Odour:	fishy
Odour threshold:	not established
pH:	not established
Melting point/freezing point (°C) at 1013 hPa:	14 -15
Initial boiling point (at 1013 hPa in °C):	279
Flash point (at 1013 hPa in °C):	136
Evaporation rate:	not established
Flammability (solid, gas):	the product is liquid
Upper/lower flammability or explosive limits (% vol.):	not established
Vapour pressure (kPa at 20 °C):	not established
Vapour density:	not established
Relative density (at 20 °C):	0.996
Solubility (in g/l at 20 °C) in water:	not soluble
Partition coefficient: n-octanol/water (log p_{ow} at 25 °C and pH 6,8):	not established
Auto-ignition temperature (at 1013 hPa in °C):	not established
Decomposition temperature:	not established
Viscosity (mPa.s at 20 °C):	not established
Explosive properties:	no explosive properties
Oxidising properties:	no oxidising properties

9.2 Other information: -

SECTION 10: Stability and reactivity

10.1 Reactivity: **None known, based on information available**

10.2 Chemical stability: **Stable under normal conditions.**

10.3 Possibility of hazardous reactions: **None known, based on information available**

10.4 Conditions to avoid: **Incompatible products.**

10.5 Incompatible materials: **Acids, Strong oxidizing agents, Acid chlorides.**

10.6 Hazardous decomposition products: **Nitrogen oxides (NO_x), Carbon monoxide (CO), Carbon dioxide (CO₂).**

SAFETY DATA SHEET

N-PHENYLCYCLOHEXYLAMINE

SECTION 11: Toxicological information

Information on toxicological effects:

CLP evaluation:

11.1 Acute toxicity: **category 4**

- Based on test data

11.2 Irritation

Dermal irritation: **category 2**

Eye irritation: **category 2**

11.3 Sensitisation

Skin sensitisation: **was not tested**

11.4 Mutagenicity: **not available**

11.5 Carcinogenicity: **not available**

11.6 Reproductive toxicity: **not available**

11.7 STOT– single exposure: **Respiratory system**

11.8 Specific target organs toxicity – repeated exposure: **not available**

11.9 Aspiration hazard: **not available**

SECTION 12: Ecological information

12.1 Toxicity

12.1.1 Aquatic toxicity: **not available**

12.1.2 Sediment toxicity: **not available**

12.1.3 PNEC (Predicated No Effect Concentration) – **not determined**

12.2 Persistence and degradability: **not available**

12.3 Bio-accumulative potential: **not available**

12.4 Mobility in soil: **May enter the environment from waste water.**

Stability: **not available**

Adsorption: **not available**

12.5 Results of PBT and vPvB assessment: **not included**

12.6 Other adverse effects: **not specified**

SECTION 13: DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods: **Incineration in a hazardous waste incineration plant in accordance with Act on Wastes under the catalogue numbers 16 0305 or 16 0508.**

SAFETY DATA SHEET

N-PHENYLCYCLOHEXYLAMINE

Disposal of contaminated packaging: **Rinse with water, dispose the caught water and packaging in accordance with valid regulations.**

SECTION 14: Transport information

Land transport (ADR/RID)
Marine transport (IMPG)
Air transport (ICAO/IA TA)

14.1 UN number:	2810
14.2 UN proper shipping name:	TOXIC LIQUID, ORGANIC, N.O.S. (N-CYCLOHEXYLANILINE)
14.3 Transport hazard class(es):	6.1, T1
Hazard identification number (Kemler code):	60
14.4 Packing group:	III
14.5 Environmental hazards:	No
Marine pollutant:	No
14.6 Special precautions for user:	not included in „Segregation Groups“
EMS:	F-A, S-A
14.7 Transport in bulk according to Annex II of MARPOL and the IBC Code:	Irrelevant

SECTION 15: Regulatory information

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

15.1.1 EU regulations concerning safety, health and environment/specific legislation concerning substances or mixtures, as amended:

- 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;
- Directive 2008/98/EC of the European Parliament and of the Council of 19 November 2008 on waste and repealing certain Directives;
- Council Directive 96/82/EC on the control of major-accident hazards involving dangerous substances.

15.1.2 Regulations valid in CR and concerning safety, health and environment/specific legislation concerning substances or mixtures, as amended:

- Act 350/2011 Coll., on chemical substances and chemical mixtures and on amendments to some acts;

SAFETY DATA SHEET

N-PHENYLCYCLOHEXYLAMINE

- Decree of Ministry of Environment no. 93/2016 Coll. laying down Waste Catalogue, List of Dangerous Waste and lists of wastes and states for the purpose of export, import and transit of wastes and procedure of granting approval for export, import and transit of wastes (Waste Catalogue);

15.2 Chemical safety assessment

Chemical safety assessment will be provided.

SECTION 16: Other information

16.1 This safety data sheet supersedes all previous versions.

16.2 List of abbreviations

Carc.:	Carcinogenicity
CAS:	Chemical Abstracts Service
CLP:	Classification, labelling, packaging regulation
CSR:	Chemical safety report
DNEL:	Derived no-effect level
ES:	Exposure scenario
EC:	European Commission
EC ₅₀ :	Median effective concentration EC ₅₀ – used in toxicity tests. Median effective concentration EC ₅₀ is the concentration of substance that causes 50 % mortality or 50 % decrease of growth or growth rate with reference to the control sample.
EINECS:	European Inventory of Existing Commercial Chemical Substances
ELINCS:	European List of Notified Chemical Substances
Irrit.:	Irritant
LC ₅₀ :	Lethal concentration, 50 % (lethal concentration) is used for toxicity tests
LD ₅₀ :	Absolute lethal dose that kills 50 % of members of population
LOAEC:	Lowest observed adverse effect concentration
NOAEC:	No observed adverse effect concentration
NOEC:	No observed effect concentration
OECD:	Organisation for Economic Cooperation and Development
PBT:	Persistent, bioaccumulative and toxic
PNEC:	Predicted no-effect concentration
REACH:	Registration, Evaluation, Authorisation and Restriction of Chemicals
Sens.:	Sensitivity
STOT:	Specific target organs toxicity
STOT SE:	Specific target organs toxicity - single exposure
STOT RE:	Specific target organs toxicity - repeated exposure
STP:	Sewage treatment plant
SU:	Sector of use
Tox.:	Toxicity
vPvB:	Very persistent and very bioaccumulative

16.3 A list of mentioned phrases:

H phrases:

H302+H312+H332 Harmful if swallowed, in contact with skin or if inhaled.

H315 Causes skin irritation.

H319 Causes serious eye irritation.

H335 May cause respiratory irritation.

P phrases:

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

P301+P312 IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell.

SAFETY DATA SHEET

N-PHENYLCYCLOHEXYLAMINE

P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

16.4 Sources used

Information from literature

16.5 History of revisions

Issue	Date	Change
1.0	11 October 2016	Preparation of the safety data sheet according to Regulation (EC) No 1907/2006 of the European Parliament and of the Council
2.0	01 June 2016	Preparation of the safety data sheet according to Regulation (EC) No 1907/2006 of the European Parliament and of the Council

Prepared by: IT&Quality, ecology and safety department – Ing. Zuzana Svobodová

Approved by: Head of IT&Quality, ecology and safety department – Ing. Stanislav Pekara, MBA

Version: English
Date: 01.06.2017
Safety Data Sheet
N-phenylcyclohexylamine

www.borsodchem-cz.com

The mentioned data reflect the present state of knowledge and experience and they are in compliance with valid legislation of the Czech Republic. The client is responsible for observing valid national legislation in the place of use.

Manufactured by:

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