An ISO 9001 : 2015 & GMP Certified Company 101, Aarkay Ruby Industrial Estate (1B), Opp Shree Narayan Industrial Estate, Chinchpada, Vasai East, Waliv, Maharashtra 401208. Tel : + 91 98200 41841 Email : <u>info@ottokemi.com</u> Web : <u>www.ottokemi.com</u>

MATERIAL SAFETY DATA SHEET (MSDS)

SECTION 1. Product identifiers

Product name: Naphthalene, GR 99%+ Product Code: N 1207 CAS No : 91-20-3

1.2. Relevant identified uses of the substance or mixture and uses advised against Use : Industrial. For professional use only.

1.3. Details of the supplier of the safety data sheet
Company identification
OTTO CHEMIE PVT LTD
101, Aarkay Ruby Industrial Estate(1B), Opp Shree Narayan Industrial Estate, Chinchpada, Vasai East, Waliv, Maharashtra 401208.
Email info@ottokemi.com

1.4. Emergency telephone number Phone no. : + 91 22 2207 0099 (9:00am - 6:00 pm).

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture Flammable solids, (Category 2) Acute toxicity, (Category 4) Carcinogenicity, (Category 2) Short-term (acute) aquatic hazard, (Category 1) Long-term (chronic) aquatic hazard, (Category 1) 2.2 Label elements Labelling according Regulation (EC) No 1272/2008 Pictogram Signal Word Hazard Statements H228 H302 H351 H410 **Precautionary Statements** P202 P210

P240 P273 P301 + P312

P308 + P313 Supplemental Hazard Statements Reduced Labeling (<= 125 ml) Pictogram Signal Word Hazard Statements H351 Precautionary Statements P202

P308 + P313 Supplemental Hazard H228: Flammable solid. H302: Harmful if swallowed. H351: Suspected of causing cancer. H400: Very toxic to aquatic life.

H410: Very toxic to aquatic life with long lasting effects.

Warning

Flammable solid. Harmful if swallowed. Suspected of causing cancer. Very toxic to aquatic life with long lasting effects.

Do not handle until all safety precautions have been read and understood. Keep away from heat, hot surfaces, sparks, open flames and

other ignition sources. No smoking.

Ground and bond container and receiving equipment. Avoid release to the environment.

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

IF exposed or concerned: Get medical advice/ attention. none

Warning

Suspected of causing cancer.

Do not handle until all safety precautions have been read and understood. IF exposed or concerned: Get medical advice/ attention. none

DISCLAIMER

Otto Chemie Pvt Ltd - products are only for laboratory use only. Not for drug, medicinal, household or any other use. No liability accepted for mishandling in use - please test before use

Otto Chemie Pvt Ltd - shall not be responsible for any damage resulting from handling or from contact with the above product.

An ISO 9001 : 2015 & GMP Certified Company 101, Aarkay Ruby Industrial Estate (1B), Opp Shree Narayan Industrial Estate, Chinchpada, Vasai East, Waliv, Maharashtra 401208. Tel : + 91 98200 41841 Email : info@ottokemi.com Web : www.ottokemi.com

Statements

2.3 Other hazards

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

Ecological information:

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

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

SECTION 3: Composition/information on ingredients

3.1 SubstancesFormulaCMolecular weightCAS-No.EC-No.22

: C10H8 : 128,17 g/mol : 91-20-3 : 202-049-5

Component	Classification	Concentration
Naphthalene		
CAS-No. 91-20-3 EC-No. 202-049-5	Flam. Sol. 2; Acute Tox. 4; Carc. 2; Aquatic Acute 1; Aquatic Chronic 1; H228, H302, H351, H400, H410	<= 100 %

For the full text of the H-Statements mentioned in this Section, see Section 16.

SECTION 4: First aid measures

4.1 Description of first-aid measures

General advice

Show this material safety data sheet to the doctor in attendance.

If inhaled

After inhalation: fresh air. Call in physician.

In case of skin contact

In case of skin contact: Take off immediately all contaminated clothing. Rinse skin with

water/ shower. Consult a physician.

In case of eye contact

After eye contact: rinse out with plenty of water. Call in ophthalmologist. Remove contact

lenses. If swallowed

After swallowing: immediately make victim drink water (two glasses at most). Consult a physician.

4.2 Most important symptoms and effects, both acute and delayed

The most important known symptoms and effects are described in the labelling (see section

2.2) and/or in section 11

4.3 Indication of any immediate medical attention and special treatment needed

No data available

SECTION 5: Firefighting measures

5.1 Extinguishing media
Suitable extinguishing media
Water Foam Carbon dioxide (CO2) Dry powder
Unsuitable extinguishing media
For this substance/mixture no limitations of extinguishing agents are given.
5.2 Special hazards arising from the substance or mixture
Carbon oxides
Combustible.
Vapors are heavier than air and may spread along floors.
Forms explosive mixtures with air on intense heating.

DISCLAIMER

Otto Chemie Pvt Ltd - products are only for laboratory use only. Not for drug, medicinal, household or any other use. No liability accepted for mishandling in use - please test before use

Otto Chemie Pvt Ltd - shall not be responsible for any damage resulting from handling or from contact with the above product.

An ISO 9001 : 2015 & GMP Certified Company 101, Aarkay Ruby Industrial Estate (1B), Opp Shree Narayan Industrial Estate, Chinchpada, Vasai East, Waliv, Maharashtra 401208. Tel : + 91 98200 41841 Email : info@ottokemi.com Web : www.ottokemi.com

Development of hazardous combustion gases or vapours possible in the event of fire. 5.3 Advice for firefighters Stay in danger area only with self-contained breathing apparatus. Prevent skin contact by keeping a safe distance or by wearing suitable protective clothing. 5.4 Further information Remove container from danger zone and cool with water. Prevent fire extinguishing water from contaminating surface water or the ground water system. **SECTION 6: Accidental release measures** 6.1 Personal precautions, protective equipment and emergency procedures Advice for non-emergency personnel: Avoid inhalation of dusts. Avoid substance contact. Ensure adequate ventilation. Keep away from heat and sources of ignition. Evacuate the danger area, observe emergency procedures, consult an expert. For personal protection see section 8. 6.2 Environmental precautions Do not let product enter drains. Risk of explosion. 6.3 Methods and materials for containment and cleaning up Cover drains. Collect, bind, and pump off spills. Observe possible material restrictions (see sections 7 and 10). Take up dry. Dispose of properly. Clean up affected area. Avoid generation of dusts. 6.4 Reference to other sections For disposal see section 13. **SECTION 7: Handling and storage** 7.1 Precautions for safe handling Advice on safe handling Work under hood. Do not inhale substance/mixture. Advice on protection against fire and explosion Keep away from open flames, hot surfaces and sources of ignition. Take precautionary measures against static discharge. Hygiene measures Immediately change contaminated clothing. Apply preventive skin protection. Wash hands and face after working with substance. For precautions see section 2.2. 7.2 Conditions for safe storage, including any incompatibilities Storage conditions Tightly closed. Keep away from heat and sources of ignition. Storage class Storage class (TRGS 510): 4.1B: Flammable solid hazardous materials 7.3 Specific end use(s) Apart from the uses mentioned in section 1.2 no other specific uses are stipulated **SECTION 8: Exposure controls/personal protection** 8.1 Control parameters Ingredients with workplace control parameters 8.2 Exposure controls Personal protective equipment Eye/face protection Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU). Safety glasses Skin protection Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands. The selected protective gloves have to satisfy the specifications of Regulation (EU) 2016/425 and the standard EN 374 derived from it. Full contact Material: Nitrile rubber Minimum layer thickness: 0,11 mm Break through time: 480 min

DISCLAIMER

Otto Chemie Pvt Ltd - products are only for laboratory use only. Not for drug, medicinal, household or any other use. No liability accepted for mishandling in use - please test before use

Otto Chemie Pvt Ltd - shall not be responsible for any damage resulting from handling or from contact with the above product.

An ISO 9001 : 2015 & GMP Certified Company 101, Aarkay Ruby Industrial Estate (1B), Opp Shree Narayan Industrial Estate, Chinchpada, Vasai East, Waliv, Maharashtra 401208. Tel : + 91 98200 41841 Email : <u>info@ottokemi.com</u> Web : <u>www.ottokemi.com</u>

Material tested:Dermatril® (KCL 740 / Aldrich Z677272, Size M) Splash contact Material: Nitrile rubber Minimum layer thickness: 0,11 mm Break through time: 480 min Material tested:Dermatril® (KCL 740 / Aldrich Z677272, Size M) data source: KCL GmbH, D-36124 Eichenzell, phone +49 (0)6659 87300, e-mail sales@kcl.de, test method: EN374 If used in solution, or mixed with other substances, and under conditions which differ from EN 374, contact the supplier of the EC approved gloves. This recommendation is advisory only and must be evaluated by an industrial hygienist and safety officer familiar with the specific situation of anticipated use by our customers. It should not be construed as offering an approval for any specific use scenario. Body Protection Flame retardant antistatic protective clothing. Respiratory protection Recommended Filter type: Filter A-(P3) The entrepeneur has to ensure that maintenance, cleaning and testing of respiratory protective devices are carried out according to the instructions of the producer. These measures have to be properly documented. Control of environmental exposure Do not let product enter drains. Risk of explosion. **SECTION 9: Physical and chemical properties** 9.1 Information on basic physical and chemical properties a) Physical state flakes, granules b) Color white c) Odor aromatic Melting point/ range: 79,5 - 81,0 °C d) Melting point/freezing point e) Initial boiling point 218 °C - lit. and boiling range f) Flammability (solid, The substance or mixture is a flammable solid with the category 2. - Flammability (solids) gas) g) Upper/lower Upper explosion limit: 5,9 %(V) flammability or Lower explosion limit: 0,9 %(V) explosive limits h) Flash point 78,5 °C - closed cup - ISO 2719 526 - 587 °C i) Autoignition temperature at 1.013 hPa - DIN 51794 j) Decomposition No data available temperature k) pH No data available I) Viscosity Viscosity, kinematic: No data available Viscosity, dynamic: No data available m) Water solubility 0.0308 g/l at 25 °C - OECD Test Guideline 105- slightly soluble n) Partition coefficient: log Pow: 3,4 at 25 °C - OECD Test Guideline 107 n-octanol/water Bioaccumulation is not expected. o) Vapor pressure 0,072 hPa at 20 °C - OECD Test Guideline 104 1,08 g/cm3 at 24,7 °C - OECD Test Guideline 109 p) Density Relative density No data available q) Relative vapor No data available density r) Particle No data available characteristics s) Explosive properties Not classified as explosive. t) Oxidizing properties none 9.2 Other safety information

31,8 mN/m at 100,0 °C

DISCLAIMER

Surface tension

Otto Chemie Pvt Ltd - products are only for laboratory use only. Not for drug, medicinal, household or any other use. No liability accepted for mishandling in use - please test before use

Otto Chemie Pvt Ltd - shall not be responsible for any damage resulting from handling or from contact with the above product.

An ISO 9001 : 2015 & GMP Certified Company 101, Aarkay Ruby Industrial Estate (1B), Opp Shree Narayan Industrial Estate, Chinchpada, Vasai East, Waliv, Maharashtra 401208. Tel : + 91 98200 41841 Email : info@ottokemi.com Web : www.ottokemi.com

SECTION 10: Stability and reactivity

10.1 Reactivity Forms explosive mixtures with air on intense heating. A range from approx, 15 Kelvin below the flash point is to be rated as critical. The following applies in general to flammable organic substances and mixtures: in correspondingly fine distribution, when whirled up a dust explosion potential may generally be assumed. 10.2 Chemical stability The product is chemically stable under standard ambient conditions (room temperature). 10.3 Possibility of hazardous reactions Violent reactions possible with: Oxidizing agents chromium(VI) oxide benzoyl chloride aluminium chloride Risk of explosion with: nitrogen oxides 10.4 Conditions to avoid Heat, flames and sparks. Strong heating. 10.5 Incompatible materials No data available 10.6 Hazardous decomposition products In the event of fire: see section 5 **SECTION 11: Toxicological information** 11.1 Information on toxicological effects Routes of Entry: Absorbed through skin. Dermal contact. Eye contact. Toxicity to Animals: Oral LD50 Rat: 1500 mg/kg; Dermal LD50 Rabbit: 2000mg/kg Inhalation LC50 Rat: > 50mg/L. Chronic Effects on Humans: CARCINOGENIC EFFECTS: Classified None. by NTP, None. by OSHA, None. by NIOSH. Other Toxic Effects on Humans: Hazardous in case of skin contact (irritant), of inhalation (lung irritant). Special Remarks on Toxicity to Animals: Not available. Special Remarks on Chronic Effects on Humans: Not available. Special Remarks on other Toxic Effects on Humans: Not available. **SECTION 12: Ecological information** 12.1 Toxicity Toxicity to fish flow-through test LC50 - Oncorhynchus mykiss (rainbow trout) - 1,6 mg/l - 96 h (OECD Test Guideline 203)

Toxicity to daphnia and other aquatic invertebrates static test EC50 - Daphnia magna (Water flea) - 2,16 mg/l - 48 h (OECD Test Guideline 202) Toxicity to algae static test EC50 - Pseudokirchneriella subcapitata (green algae) -2,96 mg/l - 4 h (US-EPA) Remarks: (ECHA) Toxicity to fish(Chronic toxicity) flow-through test LC50 - Oncorhynchus kisutch (coho salmon) - 2,1 mg/l - 96 h Remarks: (ECHA) flow-through test NOEC - Oncorhynchus kisutch (coho salmon) - 0,37 mg/l - 40 Days Remarks: (ECHA) Toxicity to daphnia and other aquatic

DISCLAIMER

Otto Chemie Pvt Ltd - products are only for laboratory use only. Not for drug, medicinal, household or any other use. No liability accepted for mishandling in use - please test before use

Otto Chemie Pvt Ltd - shall not be responsible for any damage resulting from handling or from contact with the above product.

An ISO 9001 : 2015 & GMP Certified Company 101, Aarkay Ruby Industrial Estate (1B), Opp Shree Narayan Industrial Estate, Chinchpada, Vasai East, Waliv, Maharashtra 401208. Tel : + 91 98200 41841 Email : info@ottokemi.com Web : www.ottokemi.com

Remarks: (ECHA) 12.2 Persistence Biodegradability a Result: 2 % - Not (OECD Test Guid 12.3 Bioaccumula Bioaccumulation (at 25 °C(Naphtha Bioconcentration (OECD Test Guid Remarks: Bioaccu 12.4 Mobility in sc No data available 12.5 Results of PI This substance/m bioaccumulative a levels of 0.1% or 12.6 Endocrine di Product: Assessment	 Daphnia pulex (Water flea) - 0,59 mg/l and degradability terobic - Exposure time 28 d readily biodegradable. eline 302C) tive potential Cyprinus carpio (Carp) - 56 d lene) factor (BCF): 36,5 - 168 eline 305) umulation is unlikely. bil BT and vPvB assessment ixture contains no components conside and toxic (PBT), or very persistent and v higher. srupting properties The substance/mixture does not co considered to have endocrine disrup according to REACH Article 57(f) or Delegated regulation (EU) 2017/2100 Regulation (EU) 2018/605 at levels o se effects 	red to be either persistent, rery bioaccumulative (vPvB) at ntain components ting properties Commission 0 or Commission		
13.1 Waste treatn No data available	nent methods			
SECTION 14: Tra	insport information			
14.1 UN number				
ADR/RID: 1334 IMDG: 1334 IATA: 1334				
14.2 UN proper shipping name ADR/RID : NAPHTHALENE, REFINED				
IMDG : NAPHTHALENE, REFINED				
IATA	: Naphthalene, refined			
14.3 Transport ha	zard class(es)			
ADR/RID: 4.1		IMDG: 4.1	IATA: 4.1	
14.4 Packaging g ADR/RID: III	roup	IMDG: III	IATA: III	
14.5 Environment	al hazards	IMDG. III		
ADR/RID: yes		IMDG Marine pollutant: yes	IATA: no	
14.6 Special prec	autions for user	····· • • • • • • • • • • • • • • • • •		
Tunnel restriction	code : (E)			
Further information	n : No data available			
15.1 Safety, healt substance or mixt This material safe 1907/2006. Authorisations an National legislatio	ty data sheet complies with the require d/or restrictions on use n	•		
Seveso III: Directi	ve 2012/18/EU of the			

European Parliament and of the Council on the control of major-accident hazards

DISCLAIMER

Otto Chemie Pvt Ltd - products are only for laboratory use only. Not for drug, medicinal, household or any other use. No liability accepted for mishandling in use - please test before use

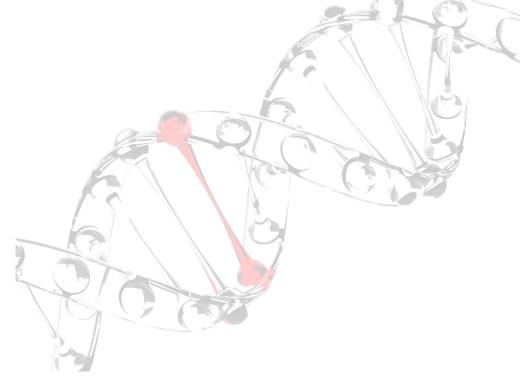
Otto Chemie Pvt Ltd - shall not be responsible for any damage resulting from handling or from contact with the above product.

An ISO 9001 : 2015 & GMP Certified Company 101, Aarkay Ruby Industrial Estate (1B), Opp Shree Narayan Industrial Estate, Chinchpada, Vasai East, Waliv, Maharashtra 401208. Tel : + 91 98200 41841 Email : <u>info@ottokemi.com</u> Web : <u>www.ottokemi.com</u>

involving dangerous substances. E1 ENVIRONMENTAL HAZARDS Other regulations Observe work restrictions regarding maternity protection in accordance to Dir 92/85/EEC or stricter national regulations where applicable. Take note of Dir 94/33/EC on the protection of young people at work. 15.2 Chemical Safety Assessment For this product a chemical safety assessment was not carried out

SECTION 16: Other Information

This safety data sheet should be used in conjunction with technical sheets. It does not replace them. The information given is based on our knowledge of this product, at the time of publication. It is given in good faith. The attention of the user is drawn to the possible risks incurred by using the product for any other purpose other than that for which it was intended. This does not in any way excuse the user from knowing and applying all the regulations governing his activity. It is the sole responsibility of the user to take all precautions required in handling the product. The aim of the mandatory regulations mentioned is to help the user to fulfill his obligations regarding the use of hazardous products.



DISCLAIMER

Otto Chemie Pvt Ltd - products are only for laboratory use only. Not for drug, medicinal, household or any other use. No liability accepted for mishandling in use - please test before use

Otto Chemie Pvt Ltd - shall not be responsible for any damage resulting from handling or from contact with the above product.

Otto Chemie Pvt Ltd - provides the information contained herein in good faith but makes no representation as to its comprehensiveness or accuracy. This document is intended only as a guide to the appropriate precautionary handling of the material by a properly trained person using this product