


Section 1 : Chemical Product and Company Identification	
<b>1.1 Product identifiers</b>	
Product Name:	Para Nitro Toluene -Solid
<b>1.2 Other means of identification</b>	
Other names	PNT, Paranitrotoluol, 4-Methylnitrobenzene, 1-Methyl-4-nitrobenzene, p-Methylnitrobenzene, 4-Nitrotoluene
CAS No.	99-99-0
REACH No.	No data available
EC number	202-808-0
Index no.	609-006-00-3
<b>1.3 Recommended use of the chemical and restrictions on use</b>	
Identified uses	4-Nitrotoluene is used as a basic chemical in the chemical industry for the manufacturing of Intermediates. These intermediates are further used in the production of optical brighteners, coloring agents, pharmaceuticals, and agrochemicals.
Uses advised against	No data available
<b>1.4 Supplier's details</b>	
Company	Deepak Nitrite Ltd. Aaditya-I, Chhani Road, Vadodara - 390 024, India Manufacturing facilities at : Vadodara, Dahej, Roha, Taloja & Hyderabad. Web : www.godeepak.com E.mail : customer.dnl@godeepak.com Tel: +91 265 276 5200/396 0200 Fax: +91 265 276 5344
<b>1.5 Emergency phone number</b>	
	In case of Spill, Leak, Fire, Exposure, or Accident, Call CHEMTREC Within USA & Canada: +1-800-424-9300, Outside USA & Canada: +1 703-527-3887 Contact no. : +91-9904406400

Section 2 : Hazards Identification	
<b>2.1 Classification of the substance or mixture</b>	
	Acute toxicity, Oral (Category 3), H301 Acute toxicity, Inhalation (Category 3), H331 Acute toxicity, Dermal (Category 3), H311
<b>2.2 Label elements including precautionary statements</b>	
<b>Pictograms</b>	
<b>Signal word</b>	Danger
<b>Hazard statement(s)</b>	H301 Toxic if swallowed H311 Toxic in contact with skin H331 Toxic if inhaled H400 Very toxic to aquatic life
<b>Precautionary statement(s)</b>	
Prevention	P273 Avoid release to the environment. P280 Wear protective gloves/ protective clothing. P302 +352: If on skin : wash with plenty of soap and water P304 +P340: If inhaled : Remove victim to fresh air and keep at rest in a position comfortable for breathing.



Response	P302 + P352 If on skin : Wash with Plenty of water P303+P340 If inhaled : Remove person to fresh air and keep comfortable for breathing. P310 Call a POISON CENTER or doctor/ physician.
Storage	P403+P233 Store in a well-ventilated place. Keep container tightly closed.
<b>2.3 Other hazards which do not result in classification</b>	
This substance/mixture contains no components considered to be either persistent, bio accumulative and toxic (PBT), or very persistent and very bio accumulative (vPvB) at levels of 0.1% or higher.	

Section 3 : Composition and Information on ingredients				
<b>3.1 Substances</b>				
Molecular formula		C7H7NO2		
Molecular weight		137.13 g/mol		
Component	CAS Number	EC number	Concentration	
Para Nitro Toleuen	99-99-0	202-808-0	99%	

Section 4 : First Aid measures	
<b>4.1 Description of necessary first-aid measures</b>	
General advice	Consult a physician. Show this safety data sheet to the doctor in attendance. Move out of dangerous area
Inhalation	If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.
Skin Contact	Wash off with soap and plenty of water. Take victim immediately to hospital. Consult a physician.
Eye Contact	Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.
Ingestion	Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.
<b>4.2 Most important symptoms / effects, acute and delayed</b>	
<p><i>The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11.</i></p> <p>Cough, wheezing, laryngitis, shortness of breath, Headache, Nausea, Vomiting, burning sensation, Absorption into the body leads to the formation of methemoglobin which in sufficient concentration causes cyanosis. Onset may be delayed 2 to 4 hours or longer.</p>	
<b>4.3 Indication of immediate medical attention and special treatment needed</b>	
<p>Immediate first aid:</p> <p>Ensure that adequate decontamination has been carried out. If patient is not breathing, start artificial respiration, preferably with a demand-valve resuscitator, bag-valve-mask device, or pocket mask, as trained. Perform CPR as necessary. Immediately flush contaminated eyes with gently flowing water. Do not induce vomiting. If vomiting occurs, lean patient forward or place on left side (head-down position, if possible) to maintain an open airway and prevent aspiration. Keep patient quiet and maintain normal body temperature. Obtain medical attention.</p>	

Section 5 : Firefighting measures	
<b>5.1 Extinguishing Media</b>	
<b>Suitable extinguishing media</b>	
Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.	
<b>Unsuitable extinguishing media</b>	
Do NOT use water jet.	
<b>5.2 Specific hazards arising from the chemical</b>	
Toxic oxides of nitrogen (NOx) and carbon oxides (Cox) may form in fire.	
<b>5.3 Special protective actions for fire-fighters</b>	

	Wear self-contained breathing apparatus for firefighting if necessary.
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Section 6 : Accidental Release Measures	
<b>6.1</b>	<b>Personal precautions, protective equipment and emergency procedures</b>
	Wear respiratory protection. Avoid breathing vapours, mist or gas. Ensure adequate ventilation. Remove all sources of ignition. Evacuate personnel to safe areas.  <i>For personal protection see section 8.</i>
<b>6.2</b>	<b>Environmental precautions</b>
	Do NOT let this chemical enter the environment. Prevent further leakage or spillage if safe to do so. Do not let product enter drains.
<b>6.3</b>	<b>Methods and materials for containment and cleaning up</b>
	Pick up and arrange disposal without creating dust. Keep in suitable, closed containers for disposal. Fill into labelled sealable containers. <i>Store and dispose of according to local /national regulations (see section 13).</i>
<b>6.4</b>	<b>Reference to other sections</b>
	<i>For disposal see section 13.</i>

Section 7 : Handling and Storage	
<b>7.1</b>	<b>Precautions for safe handling</b>
	Avoid contact with skin and eyes, Avoid formation of dust and aerosols. Provide appropriate exhaust ventilation at places where dust is formed.  <i>For precautions see section 2.2.</i>
<b>7.2</b>	<b>Conditions for safe storage, including any incompatibilities</b>
	Keep container tightly closed in a dry and well-ventilated place. Do not store near combustible materials.

Section 8 : Exposure Control / Personal Protection											
<b>8.1</b>	<b>Control parameters / Occupational Exposure limit values</b>										
	No data available										
<b>8.2</b>	<b>Exposure controls / Appropriate engineering controls</b>										
	Ensure adequate ventilation. Handle in accordance with good industrial hygiene and safety practice. Set up emergency exits and the risk-elimination area										
<b>8.3</b>	<b>Individual protection measures, such as Personal Protective Equipment (PPE)</b>										
	<table border="1"> <tr> <td style="width: 20%;">Skin Protection</td> <td>Complete suit protecting against chemicals, The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.</td> </tr> <tr> <td>Hand Protection</td> <td>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 EU Directive 89/686/EEC and the standard EN 374 derived from it.</td> </tr> <tr> <td>Eye/Face Protection:</td> <td>Use equipment for Face and eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).</td> </tr> <tr> <td>Respiratory Protection</td> <td>Where risk assessment shows air-purifying respirators are appropriate use a full-face respirator with multi-purpose combination (US) or type ABEK (EN 14387) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).</td> </tr> <tr> <td>Hygiene measures</td> <td>Avoid contact with skin, eyes and clothing. Wash hands before breaks and immediately after handling the product</td> </tr> </table>	Skin Protection	Complete suit protecting against chemicals, The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.	Hand 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 EU Directive 89/686/EEC and the standard EN 374 derived from it.	Eye/Face Protection:	Use equipment for Face and eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).	Respiratory Protection	Where risk assessment shows air-purifying respirators are appropriate use a full-face respirator with multi-purpose combination (US) or type ABEK (EN 14387) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).	Hygiene measures	Avoid contact with skin, eyes and clothing. Wash hands before breaks and immediately after handling the product
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Section 9 : Physical and Chemical Properties		
<b>9.1</b>	<b>Information on basic physical and chemical properties</b>	
a)	Physical state & Color	Form Solid
b)	Odour	Slightly yellow
c)	Odour Threshold	Aromatic
d)	pH (1% Solution)	2.4 at 25°C
e)	Freezing/ Melting point	52 °C
f)	Boiling Point/range	238 °C
g)	Flash Point	106 °C
h)	Lower explosion limit	1.5 Vol%
i)	Upper explosion limit	No data available
j)	Auto-ignition temperature	390 °C
k)	Decomposition Temperature	No data available
l)	Evaporation rate	No data available
m)	Vapor Pressure	1 mm at 53.7 °C
n)	Relative vapour density	4.72 (Air = 1)
o)	Density / relative density	1.1 - 1.2 gm/cm <sup>3</sup> at 20 °C
p)	Partition coefficient: n-octanol/water	2.37 at 25 °C (ECHA)
q)	Solubility in water	345 mg/l in water at 20 °C Soluble in Alcohol, benzene, ether
r)	Evaporation rate	No data available
<b>9.2</b>	<b>Other safety information</b>	
a)	There is no additional information	

Section 10 : Stability and reactivity	
<b>10.1</b>	<b>Reactivity</b>
	Decomposes on heating and on burning. This produces toxic fumes including nitrogen oxides. Reacts with strong oxidants and strong acids. Attacks some forms of plastic.
<b>10.2</b>	<b>Chemical Stability:</b>
	Stable under recommended storage conditions.
<b>10.3</b>	<b>Possibility of hazardous reactions</b>
	Violent reaction with : Strong alkali, strong oxidiser, Ammonia (NH <sub>3</sub> ), Strong acid, Reducing agents, Sulphur trioxide
<b>10.4</b>	<b>Conditions to Avoid:</b>
	Heat, flames and sparks.
<b>10.5</b>	<b>Incompatible Materials</b>
	Various plastics and rubbers
<b>10.6</b>	<b>Hazardous Decomposition Products:</b>
	Hazardous decomposition products formed under fire conditions. - Carbon oxides, nitrogen oxides (NO <sub>x</sub> )

Section 11 : Toxicological Information:	
<b>11.1</b>	<b>Information on toxicological effects</b>
<b>a)</b>	<b>Acute toxicity</b>
	Oral
	LD50 Oral - rat - 1960 mg/kg LD50 Oral - mouse - 1231 mg/kg LD50 Oral - rabbit - 1750 mg/kg
	Inhalation: Symptoms: Toxic if inhaled, May cause respiratory tract irritation.
	Dermal: LD50 rat Dose: = >16 gm/Kg
<b>b)</b>	<b>Skin corrosion/irritation</b>
	Toxic if absorbed through skin. May cause skin irritation.
<b>c)</b>	<b>Serious eye damage/eye irritation</b>
	May cause eye irritation.
<b>d)</b>	<b>Respiratory or skin sensitization</b>
	Toxic if absorbed through skin. May cause skin irritation.
<b>e)</b>	<b>Germ cell mutagenicity</b>
	Mutagenic effect have occurred in experimental animals.



<b>f)</b>	<b>Carcinogenicity</b>
	Not listed by ACGIH, IARC, NIOSH, NTP or OSHA
<b>g)</b>	<b>Reproductive toxicity</b>
	No data available
<b>h)</b>	<b>Specific target organ toxicity (STOT) - single exposure</b>
	No data available
<b>i)</b>	<b>Specific target organ toxicity (STOT) - repeated exposure</b>
	Kidney, Liver, Spleen blood
<b>j)</b>	<b>Aspiration hazard</b>
	No data available
<b>11.2</b>	<b>Additional Information</b>
	No additional information available.

Section 12 : Ecological Information	
<b>12.1</b>	<b>Toxicity</b>
	Acute fish toxicity LC <sub>50</sub> 48.7 mg/l-96 hr-Pimephales promelas (fathead minnow) 20 mg/l-LC <sub>0</sub> -Leuciscus idus (Golden orfe) Acute toxicity to aquatic 7.5 mg/l - 48h - Daphnia magna (Water flea) Invertebrate EC50 Toxicity to algae Growth inhibition EC50 – Chlorella Pyrenoidosa - 22 mg/l - 96 h
<b>12.2</b>	<b>Persistence and Degradability</b>
	Biodegradability with regards to its chemical structure 4-nitrotoluene is not expected to hydrolyze under environmental conditions.
<b>12.3</b>	<b>Bio accumulative potential</b>
	No data available
<b>12.4</b>	<b>Mobility in soil</b>
	Is not likely mobile in the environment due its low water solubility.
<b>12.5</b>	<b>Other adverse effects</b>
	Tumorigenic effects have been reported in experimental animals.
<b>12.5</b>	<b>Results of PBT and vPvB assessment</b>
	No data available
<b>12.6</b>	<b>Other adverse effects</b>
	Toxic to aquatic life with long lasting effects.

Section 13 : Disposal considerations	
<b>13.1</b>	<b>Disposal Methods</b>
<b>a)</b>	<b>Product</b>
	Contact a licensed professional waste disposal service to dispose of this material. Dissolve or mix the material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber. Observe all federal, state, and local environmental regulations.
<b>b)</b>	<b>Contaminated packaging</b>
	Dispose of as unused product.

Section 14 : Transport information			
<b>14.1</b>	<b>UN number</b>		
	ADR/RID: 3446	IMDG:3446	IATA: 3446
<b>14.2</b>	<b>Proper Shipping Name</b>		
	ADR/RID: Para Nitro Toluene	IMDG: Para Nitro Toluene	IATA: Para Nitro Toluene
<b>14.3</b>	<b>Transport hazard class(es)</b>		
	ADR/RID: 6.1	IMDG: 6.1	IATA: 6.1
<b>14.4</b>	<b>Packaging group</b>		
	ADR/RID: II	IMDG: II	IATA: II
<b>14.5</b>	<b>Environmental hazards</b>		
	ADR/RID: NO	IMDG: NO	IATA: NO
<b>14.6</b>	<b>Special precautions for user</b>		
	Provisions for dangerous good (ADR) should be complied within the premises.		

<b>14.7</b>	<b>Transport in bulk according to Annex II of MARPOL 73/78 and IBC Code</b>	
	The cargo is not intended to be carried in bulk	
	<b>Section 15 : Regulatory information</b>	
<b>15.1</b>	<b>Safety, health and environmental regulations specific for the product in question</b>	
	Listing of substance for applicability of various regulations / National inventories:	
	<b>Regulations / National inventories</b>	<b>Status</b>
	European Inventory of Existing Commercial Chemical Substances (EINECS)	Listed
	United States Toxic Substances Control Act (TSCA) Inventory	Listed
	AICS Australian Inventory of Chemical Substances	Listed
	CSCL-ENCS List of Existing and New Chemical Substances (CSCL-ENCS)	Listed
	TSCA Toxic Substance Control Act	Listed
	TCSI Taiwan Chemical Substance Inventory	Listed
	Philippines Inventory of Chemicals and Chemical Substances (PICCS)	Listed
	New Zealand Inventory of Chemicals (NZIoC)	Listed
	Korea Existing Chemicals List (KECL)	Listed
	REACH registered substances REACH-Reg.	Listed
	Chinese Chemical Inventory of Existing Chemical Substances (China IECSC)	Listed
<b>15.2</b>	<b>Chemical safety assessment</b>	
	<i>Product a chemical safety assessment was not carried out for this product.</i>	

	<b>Section 16 : Other information</b>	
<b>16.1</b>	<b>Abbreviations and acronyms</b>	
	<ul style="list-style-type: none"> <li>• <i>ADN : European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways</i></li> <li>• <i>ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road</i></li> <li>• <i>BCF : bioconcentration factor</i></li> <li>• <i>CAS: Chemical Abstracts Service</i></li> <li>• <i>CLP : Regulation (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures</i></li> <li>• <i>CMR : Carcinogenic, Mutagenic or toxic for Reproduction</i></li> <li>• <i>DGR : Dangerous Goods Regulations (see IATA/DGR)</i></li> <li>• <i>EC50: Effective Concentration 50%</i></li> <li>• <i>EINECS : European Inventory of Existing Commercial Chemical Substances</i></li> <li>• <i>ELINCS : European List of Notified Chemical Substances</i></li> <li>• <i>EmS : Emergency Schedule</i></li> <li>• <i>GHS : Globally Harmonized System of Classification and Labelling of Chemicals" developed by the United Nations</i></li> <li>• <i>IATA : International Air Transport Association</i></li> <li>• <i>IATA/DGR : Dangerous Goods Regulations (DGR) for the air transport (IATA)</i></li> <li>• <i>ICAO International Civil Aviation Organization</i></li> <li>• <i>IMDG : International Maritime Dangerous Goods Code</i></li> <li>• <i>Index number : Identification code given to the substance in Part 3 of Annex VI to Regulation (EC) No 1272/2008</i></li> <li>• <i>LC50: Lethal Concentration 50%</i></li> <li>• <i>LD50: Lethal Dose 50%</i></li> <li>• <i>MARPOL : Marine Pollutant as per International Convention for the Prevention of Pollution from Ships</i></li> <li>• <i>NLP : No-Longer Polymer</i></li> <li>• <i>PBT : Persistent, Bioaccumulative and Toxic</i></li> <li>• <i>REACH : Registration, Evaluation, Authorisation and Restriction of Chemicals</i></li> <li>• <i>RID: Regulation concerning the International Carriage of Dangerous Goods by Rail</i></li> <li>• <i>SVHC : Substance of Very High Concern</i></li> <li>• <i>STEL: Short term exposure limit</i></li> <li>• <i>TWA: Time Weighted Average</i></li> <li>• <i>VOC : Volatile Organic Compounds</i></li> <li>• <i>vPvB : very Persistent and very Bioaccumulative</i></li> </ul>	
<b>16.2</b>	<b>Key literature references and sources for data</b>	
	<ul style="list-style-type: none"> <li>a) <i>Regulation (EC) No. 1907/2006 (REACH), amended by 2015/830/EU</i></li> <li>b) <i>Regulation (EC) No. 1272/2008 (CLP, EU GHS)</i></li> <li>c) <i>Dangerous Goods Regulations (DGR) for the air transport (IATA)</i></li> <li>d) <i>International Maritime Dangerous Goods Code (IMDG)</i></li> <li>e)</li> </ul>	



<i>Prepared by :</i>	<i>Deepak Nitrite Ltd. E.Mail : sbraval@godeepak.com</i>
<i>Revision Date</i>	<i>01-June-2020</i>
<i>Revision Summary</i>	<i>This safety datasheet has been prepared according to the UN Globally Harmonized System of Classification and Labelling of Chemicals (GHS), and complies with the requirements of Regulation (EC) No. 1907/2006.</i>
	<p><b>DISCLAIMER:</b> <i>Deepak Nitrite Ltd. Provides the information contained herein in good faith but makes no representation as to comprehensiveness or accuracy. This document is only as a guide to a properly trained person, for the appropriate precautions and handling of the material. Individuals receiving the information must exercise their independent</i></p>

End of SDS