


Section 1 : Chemical Product and Company Identification	
1.1	Product identifiers
	Product Name: Ortho Nitro Toluene
1.2	Other means of identification
	Other names ONT, Alpha-Methylnitrobenzene, 2-Nitrotoluene, o-Nitrotoluol
	CAS No. 88-72-2
	REACH No. 01-2119433819-29-0003
	EC number 201-853-3
	Index no. 609-065-00-5
1.3	Recommended use of the chemical and restrictions on use
	Identified uses o-Nitrotoluene is used for dyes, explosives, a variety of organic chemicals, including compounds used in the agricultural chemical, pesticide, petrochemical, pharmaceutical, and rubber industries.
	Uses advised against No data available
1.4	Supplier's details
	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
1.5	Emergency phone number
	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	
2.1	Classification of the substance or mixture
	Acute toxicity, Oral (Category 4), H302 Germcell mutagenicity (Category 1B) H340 Carcinogenicity (Category 1B) H350 Reproductive toxicity (Category 2) H361 Acute aquatic toxicity (Category 2) H401
2.2	Label elements including precautionary statements
	Pictograms 
	Signal word Toxic Danger to environment.
	Hazard statement(s) H302 : Harmful if swallowed H340 : May cause genetic defects. H350 : May cause cancer H361 : Suspected of damaging fertility H401 : Toxic to aquatic life R22 : Harmful if swallowed R45 : May cause cancer R46 : May cause heritable genetic damage R62 : Possible risk of impaired fertility R 50/53 : Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

Precautionary statement(s)	
Prevention	P201: Obtained special instructions before use. P281: Use personal protective equipment as required. P308 + P313: If exposed or concerned : Get medical advice/ attention.
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	Store in a well-ventilated place. Keep container tightly closed.
2.3 Other hazards which do not result in classification	
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			
3.1 Substances			
Molecular formula	C7H7NO2		
Molecular weight	137.13 g/mol		
Component	CAS Number	EC number	Concentration
Ortho Nitro Toluene	88-72-2	201-853-3	≥99%

Section 4 : First Aid measures	
4.1 Description of necessary first-aid measures	
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.
4.2 Most important symptoms / effects, acute and delayed	
<i>Absorption into the body leads to the formation of methemoglobin which in sufficient concentration cause cyanosis. Onset may be delayed 2 to 4 hours or longer. To the best of our knowledge, the chemical, physical and toxicological properties have not been thoroughly investigated. The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11.</i>	
4.3 Indication of immediate medical attention and special treatment needed	
<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	
5.1 Extinguishing Media	
Suitable extinguishing media	
Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.	
Unsuitable extinguishing media	

5.2	Specific hazards arising from the chemical
	Toxic oxides of nitrogen (NO _x) and carbon oxides (CO _x) may form in fire.
5.3	Special protective actions for fire-fighters
	Wear self-contained breathing apparatus for firefighting if necessary.

Section 6 : Accidental Release Measures	
6.1	Personal precautions, protective equipment and emergency procedures
	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>
6.2	Environmental precautions
	Do not let this chemical enter the environment. Prevent further leakage or spillage if safe to do so. Do not let product enter drains.
6.3	Methods and materials for containment and cleaning up
	Soak up with inert absorbent material and dispose of as hazardous waste. 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>
6.4	Reference to other sections
	<i>For disposal see section 13.</i>

Section 7 : Handling and Storage	
7.1	Precautions for safe handling
	Avoid contact with skin and eyes, Avoid inhalation of vapor or mist. <i>For precautions see section 2.2.</i>
7.2	Conditions for safe storage, including any incompatibilities
	Keep container tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage. Do not store near combustible materials.

Section 8 : Exposure Control / Personal Protection											
8.1	Control parameters / Occupational Exposure limit values										
	ACGIH TLV : 2 ppm, OSHA PEL : (Vacated) TWA:2 ppm, (Vacated) TWA:11 mg/m ³ , Skin TWA:5 ppm, TWA:30 mg/m ³ ,										
8.2	Exposure controls / Appropriate engineering controls										
	Ensure adequate ventilation. Handle in accordance with good industrial hygiene and safety practice. Set up emergency exits and the risk-elimination area										
8.3	Individual protection measures, such as Personal Protective Equipment (PPE)										
	<table border="1"> <tr> <td>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		
9.1 Information on basic physical and chemical properties		
a)	Physical state & Color	Liquid
b)	Odour	Clear, Yellow Liquid
c)	Odour Threshold	Aromatic
d)	pH (1% Solution)	6-8(H ₂ O)
e)	Freezing/ Melting point	-4- -3 °C
f)	Boiling Point/range	225 °C
g)	Flash Point	95 °C Close cup
h)	Lower explosion limit	1.48 Vol%
i)	Upper explosion limit	8.8 Vol%
j)	Auto-ignition temperature	305 °C
k)	Decomposition Temperature	270 deg C Decomposes on heating producing toxic fumes (nitrogen oxides)
l)	Evaporation rate	No data available
m)	Vapor Pressure	0.16mbar at 20 °C
n)	Relative vapour density	4.73 (Air = 1)
o)	Density / relative density	1.163 gm/ml at 25 °C
p)	Partition coefficient: n-octanol/water	log Pow:2.3
q)	Solubility in water	0.44 g/L at 20 °C
r)	Evaporation rate	No data available
9.2 Other safety information		
a)	There is no additional information	

Section 10 : Stability and reactivity		
10.1 Reactivity		
No data available		
10.2 Chemical Stability:		
Stable under recommended storage conditions.		
10.3 Possibility of hazardous reactions		
No data available		
10.4 Conditions to Avoid:		
Storage with incompatible materials.		
10.5 Incompatible Materials		
Oxidizing agents, Strong base, amines, alkali		
10.6 Hazardous Decomposition Products:		
Hazardous decomposition products formed under fire conditions. - Carbon oxides, nitrogen oxides (NO _x)		

Section 11 : Toxicological Information:		
11.1 Information on toxicological effects		
a) Acute toxicity		
	Oral	LD50 Oral - rat - 891 mg/kg LD50 Oral - mouse - 970 mg/kg LD50 Oral - rabbit - 1750 mg/kg
	Inhalation:	LC50 Mouse - 328 mg/m ³ LC50 rate - 790 mg/m ³
	Dermal:	No data available
b) Skin corrosion/irritation		
Rabbit Result: No skin irritation -24 hr (OECD Test guideline 404)		
c) Serious eye damage/eye irritation		
Rabbit Result: No eye irritation -24 hr (OECD Test guideline 405)		
d) Respiratory or skin sensitization		
No data available		

e)	Germ cell mutagenicity
	May alter genetic material. In vivo tests showed mutagenic effects. Bamster fibroblast Positive OECD Test Guideline 486 Rat-male Result : Positive DNA damaged.
f)	Carcinogenicity
	This product is or contains a component that has been reported to be probably carcinogenic based on its IARC, OSHA, ACGIH, NTP or EPA Classification.
g)	Reproductive toxicity
	Suspected human reproductive toxicant
h)	Specific target organ toxicity (STOT) - single exposure
	No data available
i)	Specific target organ toxicity (STOT) - repeated exposure
	Liver
j)	Aspiration hazard
	No data available
11.2	Additional Information
	Absorption into the body leads to the formation of methaemoglobin which in delayed 2 to 4 hours or longer. To the best of our knowledge, the chemical, physical and toxicological properties have not been thoroughly investigated. RTECS : XT3150000

Section 12 : Ecological Information	
12.1	Toxicity
	Toxicity to algae <i>Chlorella pyrenoidosa</i> : EC50 : 22 mg/L : 96 hr Toxicity to daphnia and other aquatic invertebrates : EC50 -Daphnia magna-4.2 mg/L-48 h
12.2	Persistence and Degradability
	Not readily biodegradable. (OECD Test guideline 301C)
12.3	Bio accumulative potential
	No data available
12.4	Mobility in soil
	No data available
12.5	Results of PBT and vPvB assessment
	This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative at levels of 0.1% or higher.
12.6	Other adverse effects
	Toxic to aquatic life with long lasting effects.

Section 13 : Disposal considerations	
13.1	Disposal Methods
a)	Product
	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)	Contaminated packaging
	Dispose of as unused product.

Section 14 : Transport information			
14.1	UN number		
	ADR/RID: 1664	IMDG: 1664	IATA: 1664
14.2	Proper Shipping Name		
	ADR/RID: Nitrotoluenes, Liquid	IMDG: Nitrotoluenes, Liquid	IATA: Nitrotoluenes, Liquid
14.3	Transport hazard class(es)		
	ADR/RID: 6.1	IMDG: 6.1	IATA: 6.1
14.4	Packaging group		
	ADR/RID: II	IMDG: II	IATA: II
14.5	Environmental hazards		
	ADR/RID: NO	IMDG: NO	IATA: NO
14.6	Special precautions for user		
	Provisions for dangerous good (ADR) should be complied within the premises.		

14.7	Transport in bulk according to Annex II of MARPOL 73/78 and IBC Code	
	No data available.	
Section 15 : Regulatory information		
15.1	Safety, health and environmental regulations specific for the product in question	
	OSHA Hazards Target organ effect, Harmful by ingestion., Carcinogen, Teratogen, Mutagen. Listing of substance for applicability of various regulations / National inventories:	
	Regulations / National inventories	Status
	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
	Philippines Inventory of Chemicals and Chemical Substances (PICCS)	Listed
	Korea Existing Chemicals List (KECL)	Listed
	REACH registered substances REACH-Reg.	Listed
	Chinese Chemical Inventory of Existing Chemical Substances (China IECSC)	Listed
15.2	Chemical safety assessment	
	<i>Product a chemical safety assessment was not carried out for this product.</i>	

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



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<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), revision 8 and complies with the requirements of Regulation (EC) No. 1907/2006.</i>
	<p>DISCLAIMER: <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