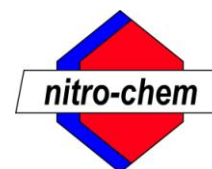


MATERIAL SAFETY DATA SHEET



Dinitrotoluene 50/65



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

1.1. Product identifier

Trade name:	Dinitrotoluene			
Constituents of the mixture				
International Chemical Identification	Index Number	EC Number	CAS Number	Registration number
2,4-dinitrotoluene	609-007-00-9	204-450-0	121-14-2	-
2,6-dinitrotoluene	609-049-00-8	210-106-0	606-20-2	-

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

Semi-product for chemical synthesis, component of the explosive materials.

1.3. Details of the supplier of the safety data sheet

Zakłady Chemiczne „NITRO-CHEM” S.A. 85-825 Bydgoszcz, ul. Wojska Polskiego 65a
tel. (052) 374 76 60, fax. (052) 361 11 24

Person responsible for the Material Safety Data Sheet:

Beata Wasilewska, e-mail : wasilewska@nitrochem.com.pl

Teresa Soczka, e-mail: t.soczka@nitrochem.com.pl

1.4. Emergency telephone number

tel. (052) 374 76 60 (weekday 7.00 a.m. – 3.00 p.m.)

tel. (01) 406 43 43 – Poisoning Head Office in Wien: Vergiftungsinformationzentrale VIZ

SECTION 2: Hazard Identification

Risks

- May cause cancer.
- Toxic by inhalation, incontact with skin and if swallowed.
- Harmful: danger of serious damage to health by prolonged exposure if swallowed.
- Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
- Possible risk of impaired fertility.
- Possible risk of irreversible changes in health condition.

Fire hazards

Flammable solid or liquid. During heating or burning the substance releases strongly toxic nitrogen oxides. Sudden heating may cause explosive decomposition.

Data sheet updated	Data sheet issued	Version	Substance	Page
25.01.2012	10.01.2004	7	Dinitrotoluene 50/65	1 z 11

2.1. Classification of the substance or mixture

According to Directive 67/548/EEC	
Warning symbols (read in point 16)	Danger symbols (R) (read in point 16)
Carc. Cat. 2	R45
Muta. Cat. 3	R68
Repr. Cat. 3	R62
T	R23/24/25
Xn	R48/22
N	R50-53

2.2. Label elements

Dinitrotoluene

mixture:

2,4-dinitrotoluene index no: 609-007-00-9

2,6-dinitrotoluene index no: 609-049-00-8



T – toxic



N – dangerous to environment

R45 May cause cancer.

R23/24/25 Toxic by inhalation, in contact with skin and if swallowed.

R48/22 Harmful: danger of serious damage to health by prolonged exposure if swallowed.

R50/53 Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

R62 Possible risk of impaired fertility

R68 Possible risk of irreversible changes in health condition

S53 Avoid exposure - obtain special instructions before use.

S45 In case of accident or if you feel unwell seek medical advice immediately (show the label where possible)

S60 This material and its container must be disposed of as hazardous waste.

S61 Avoid release to the environment. Refer to special instructions/safety data sheet

Restricted to professional users

2.3. Other hazards

- PBT and vPvB assessment haven't carried out yet. The deadline required hasn't passed.
- Toxic combustion products: Nitric oxides(NO_x), Carbon oxides (CO , CO_2).
- The contamination of eyes causes lacrimation, pain and reddening of conjunctiva with the risk of cornea damage.
- **2,4-dinitrotoluene was identified as a Substance of Very High Concern (SVHC) by ECHA and being added to the Candidate List.**

Data sheet updated	Data sheet issued	Version	Substance	Page
25.01.2012	10.01.2004	7	Dinitrotoluene 50/65	2 z 11

SECTION 3: Composition/information on ingredients

3.2. Mixtures

Substance identifier			Classification of the substance			Concentration
International Chemical Identification	Index No:	CAS No:	According to Directive 67/548/EEC	According to Regulation (EC) No 1272/2008 (CLP)		
				Hazard Class and Category Code(s)	Hazard statement Code(s)	
CONSTITUENTS						
2,4-dinitrotoluene	609-007-00-9	121-14-2	Carc. Cat. 2; R45 Muta. Cat. 3; R68 Repr. Cat. 3; R62 T; R23/24/25 Xn; R48/22 N; R50-53	Carc. 1B Muta. 2 Repr. 2 Acute Tox. 3 Acute Tox. 3 Acute Tox. 3 STOT RE 2 Aquatic Acute 1 Aquatic Chronic 1	H350 H341 H361 H331 H311 H301 H373 H400 H410	40-70%
2,6-dinitrotoluene	609-049-00-8	606-20-2	Carc. Cat. 2; R45 Muta. Cat. 3; R68 Repr. Cat. 3; R62 T; R23/24/25 Xn; R48/22 R52-53	Carc. 1B Muta. 2 Repr. 2 Acute Tox. 3 Acute Tox. 3 Acute Tox. 3 STOT RE 2 Aquatic	H350 H341 H361 H331 H311 H301 H373 H412	20-45%

Hazard statement Codes (H), danger symbols (R) and used contractions read in point 16.

SECTION 4: First aid measures

4.1. Description of first aid measures

4.1.1. First aid instructions by routes of exposure.

IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Ensure patency of respiratory tract. In case of breathing depression if possible administer oxygen until normal breathing is resumed. If necessary, make artificial respiration. **Immediately call a POISON CENTER or doctor/physician.**

IF ON SKIN: Gently wash with plenty of soap and water. Remove/Take off immediately all contaminated clothing. Wash contaminated clothing before reuse.

IF CONTACT WITH EYES: Immediately wash with plenty of pure water for at least 10 minutes. Get medical advice/attention if you feel unwell. Contamination of eyes results in lachrymation, pain, redness of conjunctivas with a risk of damage to cornea.

IF SWALLOWED: After swallowing try to remove poison as soon as possible inducing vomiting (by giving 1 or 2 glasses of water and then provoking vomits by irritating posterior throat wall, e.g., with a finger). **Do not administer milk or alcohol.** Rinse mouth. **Immediately call a POISON CENTER or doctor/physician.**

4.1.2. Additional advice

Immediate medical attention is needed in the case of: oral exposure, problems with breathing, the occurrence of allergic symptoms such as edema, loss of consciousness and other symptoms indicating a health condition aggravated. If inhalation exposure: Remove victim to fresh air and keep at rest in a position comfortable for breathing.

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

Ways of exposure

Skin, respiratory tract, gastrointestinal duct, eyes.

Data sheet updated	Data sheet issued	Version	Substance	Page
25.01.2012	10.01.2004	7	Dinitrotoluene 50/65	3 z 11

Inhalation risk

Dust and possibly vapours cause coughing, headache, vomiting and shortness of breath, related to methemoglobinemia.

Swallowing risk

It may cause nausea, vomiting, headache and difficulties with breathing.

Contact with skin and eyes

Skin contamination causes its flushing and gradually increasing blue colouring, together with headache and shortness of breath. Contamination of eyes results in lachrymation, pain, redness of conjunctivas with a risk of damage to cornea.

Health effects of acute exposure

Poisoning may result in haemolytic or aplastic anaemia, liver damage.

Health effects of chronic exposure

Liver damage, anaemia, polyneural changes, chronic dermatitis, cataract.

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

General recommendation

In case of doubt or if symptoms persist, get medical advice. Show this material substance data sheet or label.

Recommendation for medical

The problems with breathing, administer oxygen.

SECTION 5: Fire-fighting measures

5.1. Extinguishing media

Suitable extinguishing media:

Carbon dioxide, extinguishing powders, medium or heavy foams, diffused water currents

Minor fire: extinguish with powder or carbon dioxide extinguisher.

Major fire: extinguish burning containers or spilt material using foam or dispersed water currents. Containers exposed to fire or high temperature cool with water, when possible, remove from a danger zone.

If it is not possible to contain the fire very quickly, immediately withdraw from the area on fire, evacuate area.

Unsuitable extinguishing media:

Light foams, compact water currents.

5.2. Special hazards arising from the substance or mixture

Combustible. **During heating or burning the substance releases strongly toxic nitrogen oxides. Sudden heating may cause explosive decomposition.**

Combustion products: Carbon oxides (CO, CO₂), nitric oxides(NO_x).

5.3. Advice for firefighters

Combustible. **During heating or burning the substance releases strongly toxic nitrogen oxides. Sudden heating may cause explosive decomposition.**

Combustion products: Carbon oxides (CO, CO₂), nitric oxides(NO_x).

Minor fire: extinguish with powder or carbon dioxide extinguisher.

Major fire: extinguish burning containers or spilt material using foam or dispersed water currents. Containers exposed to fire or high temperature cool with water, when possible, remove from a danger zone.

If it is not possible to contain the fire very quickly, immediately withdraw from the area on fire, evacuate area.

Special protective equipment for firemen: Gas-tight protective suit with breathing apparatus insulating respiratory tract, face and head protection.

Data sheet updated	Data sheet issued	Version	Substance	Page
25.01.2012	10.01.2004	7	Dinitrotoluene 50/65	4 z 11

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

Use personal protective equipment as is recommended at point 8.

Avoid contacting with skin, eyes, breathing dust.

Remove sources of ignition, extinguish open fire, impose ban on smoking and on use of sparking equipment, avoid direct contact with released material.

6.1.2. For emergency responders

Use follows personal protective equipment: Non-static clothes (cotton), leather or rubber footwear, rubber gloves. When pouring or sieving dry dinitrotoluene use dust-proof mask or half-mask.

6.2. Environmental precautions

Do not wash into sewer. Do not let this chemical enter the environmental.

6.3. Methods and material for containment and cleaning up

Pick up spilled material into a sealed container using non-sparking tools and hand over to professional services for destroying. Contaminated product cannot be used in production.

6.4. Reference to other sections

When removing contamination, use with personal protection measures in accordance with the section 8.

Collected wastes remove in accordance with section 13.

SECTION 7: Handling and Storage

7.1. Precautions for safe handling

7.1.1. Work in a well-ventilated place, do not use sparking tools; avoid exposure to open fire, high temperatures, mechanical influences or friction. Don't smoke. **Warning! Explosion risk.**

Avoid spilling and dusting of the substance, don't breathe dust.

Avoid release to the environment.

7.1.2. When handling, do not eat or drink, avoid contact with the material, avoid inhaling of vapours and dust, observe personal hygiene principles, use personal protective equipment in accordance with the section 8. Don't smoke. After use, wash hands and take off protective clothes and personal protective equipment before entering into lunchroom.

7.2. Conditions for safe storage, including any incompatibilities

In a general chemical storeroom with a separate room (division) for toxic substances for chemical substances, with mechanical ventilation in good working condition, water-permeable floor and internal water pipe system.

Store in original sealed containers in: dry, covered and protected from direct sunlight rooms Dinitrotoluene storage temperature mustn't exceed 30°C due to the properties of 2,4-dinitrotoluene. Relative humidity of storage of dinitrotouene mustn't exceed 50%.

Materials assigned the same danger category can be stored in one storage area, storage in vicinity of concentrated acids, alkali, flammable things or substances is prohibited.

7.3. Specific end uses

Not expected any specific uses.

Data sheet updated	Data sheet issued	Version	Substance	Page
25.01.2012	10.01.2004	7	Dinitrotoluene 50/65	5 z 11

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

	NDS (limit value – eight hours)	NDSch (limit value – short term)
	mg/m ³	mg/m ³
Poland*)	0,33	-
USA (OSHA)	1,5	-
USA (ACGIH)	1,5	-

*) Regulation of Minister of Work and Social Politics of 29.11.2002 in case of the most acceptable concentration and intensity of the harmful agents for health in work surrounding (Journal of Laws, 2002 No 217 item 1833), with the next changes, (Journal of Laws, 2005 No 212 item 1769, Journal of Laws, 2007 No 161 item 1142, Journal of Laws, 2010 No 141 item 950; Journal of Laws, 2011 No 274 item 1621),

OSHA – Occupational Safety and Health Administration - USA

ACGIH -American Conference of Governmental Industrial Hygienists

Derived No-Effect Level

DNEL: missing data

Predicted NoEffect Concentration

PNEC_{aq} = 2 µg/litr

The biological limit values haven't been determined.

Monitoring in air at the workplace

PN-82/Z-04128/03 Air cleanness protection. Tests for nitrotoluene content. Measuring 2,4-dinitrotoluene content at working stands by colorimetric method.

PN-Z-04128-4: 1996Air cleanness protection. Tests for nitrotoluene content. Measuring o-, m-, p- dinitrotoluene content at working stands by gas chromatography method.

8.2. Exposure controls

Technical solutions:

Local exhaust ventilation with an enclosed dust emission area and general ventilation are necessary. Inlets of a local ventilation system located at work surface or below it. Outlets of a general ventilation system in the upper part of the room and near the floor. The ventilation systems must meet requirements set for fire or explosion hazard

Personal protective equipment:

Cotton clothes, leather or rubber footwear, rubber gloves. When pouring or sieving dry trinitrotoluene use dust-proof mask or half-mask and safety goggles. Analytical and research works related to the heating of the substance carry out in a fume cupboard.

Data sheet updated	Data sheet issued	Version	Substance	Page
25.01.2012	10.01.2004	7	Dinitrotoluene 50/65	6 z 11

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Appearance	Yellow solid
Odour	Of nitro-compounds
Odour threshold	Missing data
pH	Not concern
Boiling point	approx. 300°C with decomposition
Flash point	212°C
Flammability	Not concern
Explosive properties	Heat of explosion: Missing data Volume of products of explosion: 602 dm ³ /kg Sensitivity to shock : 50 J Sensitivity to friction : over 353 N Mechanical sensitivity index R _m : > 10 Sensitivity index R _w : 9,9 Thermal sensitivity index R _t : 8,95 Hazard index: Missing data Detonation speed : Missing data
Oxidising properties	Not concern
Vapour pressure	Missing data
Relative density	1,405 g/cm ³ at 25°C 1,310 g/cm ³ at 75°C
Solubility	Soluble in pyridine, acetone, methyl acetate, benzene, toluene, chlorobenzene, chloroform, diethyl ether and ethyl alcohol.
Solubility in water	2,7·10 ² mg/dm ³ w temp 22 °C
Octanol-Water Partition Coefficient log K _{ow}	1,98
Viscosity	Missing data
Vapour density	Względna gęstość par (powietrze = 1): 6.28
Evaporation rate	Missing data

9.2. Other information

Melting point/ freezing point: 33÷55 °C

SECTION 10: Stability and reactivity

10.1. Reactivity

Very active reducer. The substance reacts dangerously with oxidants, alkaline and metals (zinc, tin). Mixture isn't pyrophoric.

10.2. Chemical stability

The product is stable provided that the appropriate handling of the substance in accordance with the MSDS.

10.3. Possibility of hazardous reactions

Very active reducer. The substance reacts dangerously with oxidants, alkaline and metals (zinc, tin). Avoid high temperatures, no open flames. Finely dispersed particles form explosive mixtures in air. During heating or burning the substance releases strongly toxic nitrogen oxides. Sudden heating may cause explosive decomposition.

10.4. Conditions to avoid

Avoid high temperatures, no open flames. Finely dispersed particles form explosive mixtures in air.

10.5. Incompatible materials

Avoid contact with oxidants, alkaline and metals (zinc, tin).

Data sheet updated	Data sheet issued	Version	Substance	Page
25.01.2012	10.01.2004	7	Dinitrotoluene 50/65	7 z 11

10.6. Hazardous decomposition products

Nitric oxides(NO_x), Carbon oxides (CO, CO₂).

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Toxicological data

Organism	Test Type	Route	Reported Dose (Normalized Dose)*)	Source
cat	LDLo	podskórnice	25mg/kg (25mg/kg)	U.S. Public Health Service, Public Health Bulletin. Vol. 271, Pg. 110, 1941.
guinea pig	LD50	skóra	> 1gm/kg (1000mg/kg)	National Technical Information Service. Vol. OTS0572393,
mouse	LD50	doustnie	790mg/kg (790mg/kg)	Gigiena Truda i Professional'nye Zabolovaniya. Labor Hygiene and Occupational Diseases. Vol. 25(8), Pg. 50, 1981.
rat	LD50	doustnie	268mg/kg (268mg/kg)	National Technical Information Service. Vol. PB214-270,

*) for 2,4-dinitrotoluene

Hazard classes

Carcinogenicity cat.2: May cause cancer.

Germ cell mutagenicity cat.3: Possible risk of irreversible changes in health condition.

Reproductive toxicity cat.3: Possible risk of impaired fertility.

Toxic: Toxic by inhalation, in contact with skin and if swallowed.

Harmful: Harmful: danger of serious damage to health by prolonged exposure if swallowed.

Available data

Ways of exposure

Skin, respiratory tract, gastrointestinal duct, eyes.

Inhalation risk

Dust and possibly vapours cause coughing, headache, vomiting and shortness of breath, related to methemoglobinemia.

Swallowing risk

It may cause nausea, vomiting, headache and difficulties with breathing.

Contact with skin and eyes

Skin contamination causes its flushing and gradually increasing blue colouring, together with headache and shortness of breath. Contamination of eyes results in lachrymation, pain, redness of conjunctivas with a risk of damage to cornea.

Health effects of acute exposure

Poisoning may result in haemolytic or aplastic anaemia, liver damage.

Health effects of chronic exposure

Liver damage, anaemia, polyneuronal changes, chronic dermatitis, cataract.

SECTION 12: Ecological information

12.1. Toxicity

Organism	Time	Results*)
Selenastrum capricornutum	96 h	E:C50 2,6 mg/l
Chlorella pyrenoidosa	96 h	E:C50 0,9 mg/l
Microcystis aeruginosa	96 h	E:C50 0,08 mg/l

*) for 2,4-dinitrotoluene

Dangerous to environment: Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

12.2. Persistence and degradability

Data sheet updated	Data sheet issued	Version	Substance	Page
25.01.2012	10.01.2004	7	Dinitrotoluene 50/65	8 z 11

In air, DNT also does not usually remain in the environment for a long time because it is broken down by sunlight and bacteria into substances such as carbon dioxide, water, and nitric acid.

In the absence of sunlight and oxygen, any losses of DNT would apparently be dependent on biodegradation. Spangord et al. (1980) observed biodegradation in an aerobic environment, with a half-life of less than 1 hour.

In water, DNT tends to be more stable and less likely to break down, and elimination was not complete. Substance is hard biodegradable and remains in the environment for a long time. Therefore, avoid passing of this compound to surface water and soil.

12.3. Bioaccumulative potential

The distribution ratio of $K_{ow} = 1,98$ indicates that the compound accumulation level in plant and animal tissue, as well as compound accumulation and transfer in alimentary chain, should not be high.

12.4. Mobility in soil

DNT does not usually evaporate and is found mostly in the air of manufacturing plants. DNT is not a likely means of release to the air because it breaks down in air by a variety of chemical reactions that take place upon exposure to sunlight. The water solubility of DNT is sufficient to permit transport in surface or groundwaters. In water, DNT tends to be more stable and less likely to break down.

Evaporation from water containing DNT is not a likely means of release to the air. DNT is thought to break down in air by a variety of chemical reactions that take place upon exposure to sunlight.

DNT can be transferred to plants by root uptake from contaminated water or soil.

12.5. Results of PBT and vPvB assessment

PBT and vPvB assessment haven't been carried out yet. The deadline required hasn't passed.

12.6. Other adverse effects

Missing data.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Waste code: 16 03 05 – Other waste explosive (dangerous waste) – according to European list of wastes.

Never dispose of wastes by draining to the sewage system, avoid contamination of surface water and soil.

Waste must be disposed of in accordance with federal, state and local environmental control regulations.

Domestic regulations:

The Act on wastes (Dz.U. (Journal of Acts) 07.39.251 with further amendments) dated in 27 April 2001.

The Ordinance of the Minister of Environment on catalogue of wastes (Dz.U. 01.112.1206) dated in 27 September 2001.

The Act on packaging materials and packaging wastes (Dz.U. 01.63.638 with further amendments) dated in 11 May 2001.

SECTION 14: Transport information

Transport shall be carried out in accordance with legal regulations described in point 15.1, sub-point 5. For ADR/RID (transport by land), IMDG (transport by sea), transport shall be carried out in accordance with:

14.1. Number UN	3454 (solid) 1600 (melted)
14.2. Name UN	DINITROTOLUENES, SOLID for UN 3454 DINITROTOLUENES, MOLTEN for UN 1600
14.3. Transport hazard class(es) Classification code	6.1 T1 for UN 1600; T2 for UN 3454
14.4. Packing group	II
14.5. Environmental hazards	ENVIRONMENTALLY HAZARDOUS.
14.6. Special precautions for user	No smoking, use of fire and open flame.
14.7. Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code	Not expected any transport in bulk.

Data sheet updated	Data sheet issued	Version	Substance	Page
25.01.2012	10.01.2004	7	Dinitrotoluene 50/65	9 z 11

SECTION 15: Regulatory information

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

- The ordinance 1907/2006 (EC) of the European Parliament and Council, dated in 18 December 2006, on registration, evaluation, permissions and restrictions for chemicals (REACH), establishment of the European Agency of Chemicals, which amends the Directive 1999/45/EC and annuls the Ordinance of the Council No. 793/93 (EEC) and the Ordinance of the Commission No. 1488/94 (EC), as well as the Directive of the Council 76/769/ EWG and the Directives of the Commission 91/155/EEC, 93/105/EC and 2000/21/EC.
- Act on chemical substances and preparations of 11.01.01 (Journal of Laws, No11 item 84), as amended (Journal of Laws, 2001, No 100 item 1085, No 123 item 1350, No 125 item 1367; 2002 No 135 item 1145, No 142 item 1187, 2003 No 189 item 1852, 2004 No 96 item 959, No 121 item 1263, 2005 No 179 item 1485, 2006 No 171 item 1225),
- 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,
- All the working with the product must be carried out according to the rules of the regulation of Minister of Work and Social Politics of 26.09.1997 in case of general safety regulations and work hygiene (Journal of Laws, 1997 No 129 item 844), uniform text (Journal of Laws, 2003 No 169 item 1650), with the next changes (Journal of Laws, 2007 No 49 item 330),
- Regulation of Minister of Work and Social Politics of 29.11.2002 in case of the most acceptable concentration and intensity of the harmful agents for health in work surrounding (Journal of Laws, 2002 No 217 item 1833), with the next changes, (Journal of Laws, 2005 No 212 item 1769, Journal of Laws, 2007 No 161 item 1142, Journal of Laws, 2010 No 141 item 950),
- Regulation of Minister of Economy, Employment and Social Policy of 9.07.2003 on health and safety at work in manufacturing, internal transport and handling of explosives, including pyrotechnic products (Journal of Laws, 2003 No 163 item 1577)
- International transport regulations RID, ADR and IMDG
- European Council Directive **96/82/EWG (Seveso II) of 9 December 1996 on the control of major-accident hazards involving dangerous substances** with the next changes: Directive 2003/105/EWG. (According to Directive Seveso is classified as toxic - cat. 2 and dangerous to the environment – cat.9)
- Mixture is subject to restrictions according to Annex XVII of regulation (EC) No 1907/2006 of the European Parliament and Council, dated in 18 December 2006, on registration, evaluation, permissions and restrictions for chemicals (REACH).

15.2. Chemical safety assessment

Chemical safety assessment hasn't carried out yet. The deadline required hasn't passed.

SECTION 16: Other information

Explanation to used warning symbols

- T** Toxic
- N** Dangerous to environment
- Xn** Harmful

Explanation to danger symbols (R)

- R45** May cause cancer.
- R23/24/25** Toxic by inhalation, in contact with skin and if swallowed.
- R48/22** Harmful: danger of serious damage to health by prolonged exposure if swallowed.
- R50/53** Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
- R62** Possible risk of impaired fertility
- R68** Possible risk of irreversible changes in health condition
- R52/53** Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment

Explanation to used Hazard Classes

- Carc.** Carcinogenicity
- Muta.** Germ cell mutagenicity
- Repr.** Reproductive toxicity
- Acute Tox.** Acute toxicity
- STOT RE** Specific target organ toxicity — repeated exposure
- Aquatic Chronic** Chronic aquatic toxicity.
- Aquatic Acute** Acute aquatic tox.

Data sheet updated	Data sheet issued	Version	Substance	Page
25.01.2012	10.01.2004	7	Dinitrotoluene 50/65	10 z 11

Explanation to Hazard statement Codes (H)

H350 May cause cancer.

H341 Suspected of causing genetic defects

H361 Suspected of damaging fertility or the unborn child

H331 Toxic if inhaled.

H311 Toxic in contact with skin.

H301 Toxic if swallowed.

H373 May cause damage to organs (*liver, eyes, nervous system, circulatory system*) through prolonged or repeated exposure.

H400 Very toxic to aquatic life.

H410 Very toxic to aquatic life with long lasting effects.

H412 Harmful to aquatic life with long lasting effects.

Explanation to safety symbols (S)

S53 Avoid exposure - obtain special instructions before use.

S45 In case of accident or if you feel unwell seek medical advice immediately (show the label where possible)

S60 This material and its container must be disposed of as hazardous waste.

S61 Avoid release to the environment. Refer to special instructions/safety data sheet

Advices concern training

Training concern applied dangerous materials

Recommendations to apply restriction

All explosives are dangerous and must be carefully handled and used following approved safety procedures either by or under the direction of competent, experienced persons in accordance with all applicable federal, state, and local laws, regulations, or ordinances.

More information

www.nitrochem.com.pl; e-mail: nitrochem@nitrochem.com.pl

Database

2,4- and 2,6- Dinitrotoluene - Agency for Toxic Substances and Disease Registry ToxFAQs (1999)

Toxicological Profile for 2,4- and 2,6-Dinitrotoluene - Atlanta U.S., December 1998

Addendum to the Toxicological Profile for 2,4 and 2,6-Dinitrotoluene - Agency for Toxic Substances and Disease Registry Division of Toxicology and Environmental Medicine Atlanta, October 2009

and our learning.

Aim to achieve the Material Safety Data Sheet is description product only from the point of requirement of health, safety and environment protect.

Last changes

Point 14.5 was changed.

Data sheet updated	Data sheet issued	Version	Substance	Page
25.01.2012	10.01.2004	7	Dinitrotoluene 50/65	11 z 11