SAFETY DATA SHEET

[in accordance with the criteria of Regulation no 1907/2006 (REACH) as amended]

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

1.1 Product identifier

Trade name:	**Liquid fuel with wick**
Chemical name:	diethylene glycol
Index number:	603-140-00-6
Registration number:	01-2119457857-21-XXXX

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

Relevant identified uses:	product used as fuel for chafing dish apparatus, for professional use only.
Uses advised against:	not determined.

1.3 Details of the supplier of the safety data sheet

Manufacturer:	**"Nexus" Sp. z. o.o.**
Address:	41-902 Bytom, ul. Siemianowicka 98, Poland
Telephone/Fax number:	+48 32 280 96 50/ +48 32 280 89 74

E-mail address for a competent person responsible for SDS: biuro@theta-doradztwo.pl

1.4 Emergency telephone number

Contact National Poison Intoxication Centre

Section 2: Hazards identification

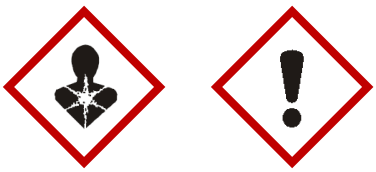
2.1 Classification of the substance or mixture

Acute Tox. 4 H302, **STOT RE 2** H373

Harmful if swallowed. May cause damage to organs: kidneys, through prolonged or repeated exposure.

2.2 Label elements

Hazard pictograms and signal words



WARNING

Hazard statements

H302	Harmful if swallowed.
H373	May cause damage to organs: kidneys, through prolonged or repeated exposure.

Precautionary statements

P102	Keep out of reach of children.
P264	Wash hands thoroughly after handling.
P270	Do not eat, drink or smoke when using this product.
P301+P312	IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell..
P330	Rinse mouth.
P501	Dispose of contents/container to an authorized waste disposal.

2.3 Other hazards

Substance does not meet criteria for PBT or vPvB in accordance with Annex XIII of Regulation REACH.

Section 3: Composition/information on ingredients

3.1 Substances

diethylene glycol

Concentration:	> 99,5%
CAS number:	111-46-6
EC number:	203-872-2

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Section 4: First aid measures

4.1 Description of first aid measures

Skin contact: consult a doctor if disturbing symptoms appear. Take off contaminated clothing. Wash contaminated skin thoroughly with plenty of water with soap.

Eye contact: consult an oculist if disturbing symptoms appear. Protect non-irritated eye and remove contact lenses. Wash out with plenty of water thoroughly for 10-15 minutes. Avoid powerful water stream – risk of cornea damage.

Ingestion: call a doctor immediately, show container or label. Immediately induce vomiting if the person is conscious with caution (risk of choking). Rinse mouth with water. Give ~100 ml solution of 40% ethyl alcohol to drink. Never give anything by mouth to an unconscious person. In case of fainting, lay the victim down in a recovery position.

Inhalation: remove to fresh air. Keep the victim warm and calm. Consult a doctor if disturbing symptoms appear.

4.2 Most import ant symptoms and effects, both acute and delayed

Skin contact: prolonged exposure may cause redness, drying, slight irritation.

Eye contact: possible redness, tearing, slight irritation.

Ingestion: may cause irritation of digestive tract, disorders of the central nervous system, kidney and liver damage; firstly, intoxication causes similar symptoms as after alcohol intoxication: agitation, problems with speaking, with balance, coordination disorders, headaches and dizziness, drowsiness etc.; then nausea and vomiting. May cause breathing disorders, in case of a severe intoxication: collapse, fainting, coma, possible death due to respiratory arrest. Lethal dose is: 0,1-5 g/kg.

Inhalation: due to the low vapour pressure of the product has a low inhalation toxicity, high vapour pressure (heated product) or mist, may cause slight irritation of respiratory tract.

Prolonged exposure: prolonged intoxication may cause renal disorder and damage with polyuria, oliguria and finally- anuria, laboratory tests demonstrated possibility of proteinuria, urinary casts and erythrocytes in urine and increased concentration of nitrogen in the blood. Serious changes in liver, such as: enlargement, congestion, fatty degeneration, may occur.

4.3 Indication of any immediate medical attention and special treatment needed

Physician makes a decision regarding further medical treatment after thoroughly examination of the injured. After ingestion, perform gastric lavage with caution (risk of choking). Intensive conservative treatment. Constant monitoring and leveling of acid-base imbalances.

Section 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media: alcohol-resistant foam, CO_2, water spray. Adjust extiguishing media to the surrounding materials.

Unsuitable extinguishing media: water jet – risk of the propagation of the flame.

5.2 Special hazards arising from the substance or mixture

During the fire, the product may produce hazardous fumes containing carbon oxides. Do not inhale combustion products, they can be dangerous for human health.

5.3 Advice for firefighters

Do not stay in the fire zone without self-contained breathing apparatus and protective clothing resistant to chemicals.

Section 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Limit the access for the outsiders into the breakdown area, until the suitable cleaning operations are completed. Ensure that removing the problem and its results is conducted by a trained personnel only. In case of large spills, isolate the exposed area. Use personal protective measures. Avoid contact with skin and eyes. Ensure adequate ventilation. Warning! Risk of slipping on the spilled product.

6.2 Environmental precautions

Isolate the spillage, remove the top layer of soil. In case of release of large amounts of the product, it is necessary to take appropriate steps to prevent it from spreading into the environment. Notify relevant emergency services.

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6.3 Methods and material for containment and cleaning up

Collect with incombustible, liquid-binding materials (e.g. sand, soil, universal binding agent, silica, sawdust, etc.) and place it in containers for waste. Collected material treat as waste. Clean the contaminated area.

6.4 Reference to other sections

Appropriate conduct with waste product – see section 13. Personal protective equipment – see section 8.

Section 7: Handling and storage

7.1 Precautions for safe handling

Handle in accordance with good occupational hygiene and safety practices. Avoid contact with skin and eyes. Before break and after work carefully wash hands. Keep unused containers tightly closed. Ensure adequate ventilation. Work away from the ignition sources.

7.2 Conditions for safe storage, including any incompatibilities

Keep only in a separated, well ventilated area, in original, tightly closed container, placed vertically. Store in a dry, cool area, protect from freezing. Avoid heat and fire sources. Avoid oxidizing agents, acids and bases. Keep away from direct exposure to sunlight. No smoking.

7.3 Specific end use(s)

Product used as chafing dish fuel.

Section 8: Exposure controls/personal protection

8.1 Control parameters

Product does not contain any components with occupational exposure limit values at working place in Community.

Please check any national occupational exposure limit values in your country.

DNEL for diethylene glycol

Inhalation (worker, log-term exposure, local effects)	60 mg/m^3
Inhalation (geeral population, long-term exposure, local effects)	60 mg/m^3
Skin (worker, long-term exposure, systemic exposure)	100 mg/kg
Skin (general population, long-term exposure, systemic effects)	53 mg/kg

PNEC for diethylene glycol

Fresh water	10 mg/l
Seawater	1 mg/l
Soil	1,53 mg/kg
Sediment	20,9 mg/kg

8.2 Exposure controls

Work in accordance with the principles of safety and hygiene. Do not eat, drink or smoke when using the product. Before break and after work wash hand thoroughly. Ensure good general and/or local ventilation at work stations to ensure the maintenance of concentrations of hazardous components in the atmosphere below the exposure limit values.

Hand and body protection

Use protective gloves if there is a risk of skin contamination. Recommended material for gloves: neoprene, nitrile rubber.

When using protective gloves during work with chemical products, it should be noted that the efficacy levels and corresponding breakthrough times do not indicate actual times of protection at a particular workplace, because the protection can be affected by many factors, e.g. temperature, other substances etc. If there are any signs of degradation, damage or change in appearance (colour, flexibility, shape), it is recommended to replace the gloves with a new pair. Please follow the manufacturer's instructions, not only in terms of gloves' usage, but also in terms of their cleaning, maintenance and storage. It is also important to know how to take off the gloves in order to avoid hands contamination.

Eye/face protection

Not required in normal conditions of use. Use goggles if there is a risk of eye contamination.

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Respiratory protection

In case of vapours and aerosols formation, use the absorbing or absorbing and filtering equipment of an adequate protective class (class 1/ protection from gasses or vapors with a volume concentration lower than 0,1%; class 2/ protection from gasses or vapors with a volume concentration lower than 0,5%; class 3/ protection from gasses or vapors with a volume concentration up to 1%). If the concentration of oxygen is ≤17% and/or the maximum concentration of toxic substance in the air is ≥1,0% of volume the isolating equipment should be used.

Personal protective equipment must meet requirements of directive 89/686/CE. Employer is obliged to ensure equipment adequate to activities carried out, with quality demands, cleaning and maintenance.

Environmental exposure controls

Avoid release to the environment, do not enter the sewage system. Possible emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation.

Section 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

physical state:	liquid
colour:	colourless
odour:	faint
odour threshold:	not determined
pH (concentrate, 20°C):	6-9
melting point/freezing point:	-6,5°C
initial boiling point and boiling range:	244,9°C
flash point:	138°C (closed crucible)
evaporation rate (n-butyl acetate=1):	not determined
flammability (solid, gas):	not applicable
upper/lower flammability or explosive limits:	10,8%/ 1,6% vol
vapour pressure (25°C):	0,008 hPa
density (20°C):	1,18 g/cm^3
solubility(ies):	soluble in water
partition coefficient: n-octanol/water:	-1,98
auto-ignition temperature:	229°C
decomposition temperature:	not determined
vapour density:	3,66
explosive properties:	not display
oxidising properties:	not display
viscosity (25°C):	30 mPa·s

9.2 Other information

refractive index:	1,447

Section 10: Stability and reactivity

10.1 Reactivity

Product is feebly reactive, will not undergo dangerous polymerization. See section 10.4-10.5

10.2 Chemical stability

The product is stable under normal conditions.

10.3 Possibility of hazardous reactions

Not known.

10.4 Conditions to avoid

Avoid direct sunlight, fire, heat and ignition sources.

10.5 Incompatible materials

Strong oxidants, acids, bases.

10.6 Hazardous decomposition products

Not known.

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Section 11: Toxicological information

11.1 Information on toxicological effects

Information regarding acute and/or delayed results of the exposure was defined on the basis of the information on product's classification and/or toxicological studies as well as the experience and knowledge of the manufacturer.

Acute toxicity

LD_{50} (rat, oral)	> 16 500 mg/kg
LD_{50} (human, oral)	1 120 mg/kg
LD_{50} (rabbit, skin)	13 300 mg/kg
LC_{50} (rat, aerosol)	> 4,6 mg/l/4h

Harmful if swallowed.

Skin corrosion/ irritation

Based on available data, the classification criteria are not met.

Serious eye damage/ irritation

Based on available data, the classification criteria are not met.

Respiratory or skin sensitisation

Based on available data, the classification criteria are not met.

Germ cell mutagenicity

Based on available data, the classification criteria are not met.

Carcinogenicity

Based on available data, the classification criteria are not met.

Reproductive toxicity

Based on available data, the classification criteria are not met.

STOT- single exposure

Based on available data, the classification criteria are not met.

STOT- repeated exposure

May cause damage to organs: kidneys, through prolonged or repeated exposure.

Aspiration hazard

Based on available data, the classification criteria are not met.

Effects on organs

Central Nervous System: headeches, dizziness, blurred vision, blackout, convulsions, coma.
Lungs: possible oedema and/ or pneumonia.
Heart and circulatory system: possible acute left ventricular failure, concussion, cardiac arrest.
Kidneys: acute renal failure, uraemia.
Blood and circulatory system: coagulation disorders, possible hemolysis, metabolic acidosis.

Section 12: Ecological information

12.1 Toxicity

Toxicity for fish	LC_{50}	75 2000 mg/l/96h (*Pimephales promelas*)
Toxicity for Daphnia	EC_{50}	100000 mg/l/24h (*Daphnia magna*)
Toxicity for algae	EC_{50}	2700 mg/l/8 days (*Scenedesmus quadricauda*)
Toxicity for aquatic microorganisms	EC_{10}	> 1995 mg/l/30 min (active sediment, municipal waste, fresh water)

The product is not classified as dangerous for environment.

12.2 Persistence and degradability

Product is biodegradable (70-80%, 28 days, method: OECD 301B).

12.3 Bioaccumulative potential

Not expected to bioaccumulate (log Po/w) -1,98

12.4 Mobility in soil

Product is easily sobuble in water ad spreads i the aquatic environment.

12.5 Results of PBT and vPvB assessment

Substance does not meet criteria for PBT or vPvB in accordance with Annex XIII of Regulation REACH.

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12.6 Other adverse effects

Product does not contribute to ozone depletion or global warming.

Section 13: Disposal considerations

13.1 Waste treatment methods

Disposal methods for the product: disposal in accordance with the local legislation. Store remainings in original containers.

Disposal methods for used packing: reuse/recycling/liquidation of empty containers dispose in accordance with the local legislation. Only containers completely emptied can be recycled.

Legal basis: Directive 2008/98/EC, 94/62/EC.

Section 14: Transport information

14.1 UN number

Not applicable. Product is not classified as dangerous in accordance with transport regulations.

14.2 UN proper shipping name

Not applicable.

14.3 Transport hazard class(es)

Not applicable.

14.4 Packing group

Not applicable.

14.5 Environmental hazards

According to transport regulations, product is not hazardous for the environment.

14.6 Special precautions for user

During handling the cargo, use personal protective measures according to section 8.

14.7 Transport in bulk according to Annex II of Marpol and the IBC Code

Not applicable.

Section 15: Regulatory information

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

Commission Regulation (EU) **2015/830** of 28 May 2015 amending Regulation (EC) No 1907/2006 of the European Parliament and of the Council on the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH)

Regulation (EC) No 1907/2006 of the European Parliament and of the Council of 18 December 2006 concerning the Registration, Evaluation, Authorization 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 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 (Text with EEA relevance) as amended.

Directive 2008/98/EC of the European Parliament and of the Council of 19 November 2008 on waste and repealing certain Directives.

European Parliament and Council Directive 94/62/EC of 20 December 1994 on packaging and packaging waste

15.2 Chemical safety assessment

Manufacturer carried out a Chemical Safety Assessment for this substance.

Section 16: Other information

Abbreviations and acronyms

PBT	Persistent, Bioaccumulative and Toxic Substances
vPvB	very Persistent and very Bioaccumulative Substances
Acute Tox. 4	Acute Toxicity category 4
STOT RE 2	Specific target organ toxicity - repeated exposure category 2

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Trainings

Before commencing working with the product, the user should learn the Health & Safety regulations, regarding handling chemicals, and in particular, undergo a proper workplace training.

Key literature references and data sources

This SDS was prepared on the basis of sheets of the individual components, literature data, online databases as well as our knowledge and experience, taking into account current legislation.

Other data

Date of update:	07.11.2016
Version:	4.0/EN
Changes:	sections 1-16
Composed by:	mgr Agata Turek (on the basis of producer's data)
Safety Data Sheet made by:	**„THETA"** Technical Consulting

The information above is based on a current available data concerning the product, but also on the experience and knowledge in this field of the producer. They are neither a quality description of the product nor a guarantee of particular features. They are to be treated as aid to safety in transport, storage and usage of the product. That does not free the user from the responsibility of improper usage of the information above and also of improper compliance with the law norms in the field.