

MATERIAL SAFETY DATA SHEET

In accordance with Regulation (EU) No 1907/2006 with later amendments

TRANSOL SP 68 -1000

Made on: 06.03.2006

Updated on: 21.12.2012

Version: 3

Page 1 of 9

SECTION 1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1. Product identifier

Trade name: TRANSOL SP 68 -1000

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

Identified applications:

Intended to use in industrial gears.

Not recommended applications: other application than identified is not recommended.

1.3. Details of the supplier of the safety data sheet

Manufacturer: **ORLEN OIL SP. Z O.O.**

Address: 31-323 Kraków, ul. Opolska 100

Phone/Fax +48 12 66 555 00 / +48 12 66 555 01

No.: Quality-related information: phone + 48 13 43 84 415

E-mail: msds@orlenoil.pl

1.4. Emergency telephone number:

+ 48 13 43 84 415 (in working days from 7.00 a.m to 3.00 p.m.)

In case of emergency call 112 (Emergency number), 998 (Fire Brigade), 999 (Ambulance Service)

SECTION 2. HAZARDS IDENTIFICATION

2.1. Classification of the substance or mixture

risks	Classification	According to Directive (EC) No. 1272/2008 (CLP):	According to Council Directive No.67/548/EEC
	resulting from physicochemical properties:		Not classified
for humans:		Not classified	Not classified
for environment:		Not classified	Not classified

2.2. Label elements

Pictogram: None

Signal word: None

Hazard statements: None

Precautionary statements: None

Additional information on the label:

EUH208 – It contains: Reaction products of bis(4-methylpentan-2-yl) dithiophosphoric acid with phosphorus oxide, propylene oxide and amines, C12-14-alkyl (branched). May cause an allergic reaction.

2.3. Other hazards

No data regarding PBT or vPvB criteria according to Annex XIII of REACH Regulation.

No test data.

MATERIAL SAFETY DATA SHEET

In accordance with Regulation (EU) No 1907/2006 with later amendments

TRANSOL SP 68 -1000

Made on: 06.03.2006

Updated on: 21.12.2012

Version: 3

Page 2 of 9

SECTION 3. COMPOSITION / INFORMATION ON INGREDIENTS

3.1. Substances – not applicable

3.2. Mixtures: a mixture of base oils and additives

Hazardous ingredients and its concentrations in the mixture:

Substance name/ REACH registration number	CAS No/ EC No	% wt.	Index number	Classification according to Council Directive No.67/548/EEC	Classification according to EC Directive No.1272/2008 (CLP)
Unspecified base oil 01-119484627-25-XXXX	64742-54-7/ 265-157-1	> 85	649-467-00-8	Not classified	Not classified
Unspecified base oil 01-2119486948-XXXX	101316-69-2/ 309-874-0		649-527-00-3	Not classified	Not classified
Reaction products of bis(4-methylpentan-2-yl) dithiophosphoric acid with phosphorus oxide, propylene oxide and amines, C12-14-alkyl (branched).*	931-384-6	<0,18	-	Xn, R22 Xi, R41-43 N, R51/53	Acute Tox. 4, H302 Aquatic Chronic 2, H411 Eye Dam. 1, H318 Flam. Liq. 3, H226 Skin Sens. 1, H317
01-2119493620-38-XXXX					

On the basis of a note L unspecified base oils in the mixture are not classified as carcinogenic (DMSO extract content (according to IP 346) <3%).

* According to the statement made by the manufacturer of a substance the oil formulated with this additive does not cause skin sensitization.

SECTION 4. FIRST AID MEASURES

4.1. Description of first aid measures

Inhalation:

Remove the victim (move/carry) from the exposure area to fresh air and keep warm and quiet. Place an unconscious person in the recovery position, loosen tight parts of clothes; control and maintain patency of the airways. Give oxygen in the case of breathing disorders; if not breathing, use artificial ventilation. In the case of loss of consciousness, respiratory disorders or persisting symptoms obtain medical aid immediately.

Skin contact:

Immediately remove contaminated/soaked clothes and shoes. Thoroughly wash contaminated skin with soapy water or mild detergent, and then rinse with water. Consult a doctor if irritation symptoms appear and persist.

NOTE: Take off contaminated/soaked clothes and remove it to a safe place, far from heat and ignition sources.

Eye contact:

Flush the contaminated eyes with running water, remove contact lenses (if worn) and continue flushing for approx. 15 minutes. When flushing, keep the eyelids wide open and move the eyeball. Consult a doctor if symptoms appear and persist.

NOTE: Do not use a stream of water which is too strong, it may damage the cornea.

Swallowing:

Obtain medical aid immediately. DO NOT INDUCE VOMITING – INCREASED ASPIRATION RISK. In the case when spontaneous vomiting occurs, keep the victim leaning forward, with her/his face directed to the ground.

Do not give milk, fat or alcohol.

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

Not determined.

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

MATERIAL SAFETY DATA SHEET

In accordance with Regulation (EU) No 1907/2006 with later amendments

TRANSOL SP 68 -1000

Made on: 06.03.2006

Updated on: 21.12.2012

Version: 3

Page 3 of 9

Do not induce vomiting and do not administer anything orally to an unconscious person. Show the material safety data sheet or the label/container to the medical staff. A person providing first aid in the area where vapour/fog concentration is unknown should be equipped with the appropriate respiratory protection.

Indications for a doctor: symptomatic treatment.

SECTION 5. PROCEEDING IN CASE OF FIRE

5.1. Extinguishing media

Suitable extinguishing media: carbon dioxide, dry powder, foam; water spray or water fog.

Unsuitable extinguishing media: water jet.

5.2. Special hazards arising from the substance or mixture

Flammable liquid with high ignition temperature. In the fire environment smokes containing carbon oxides and other unidentified thermal decomposition products of higher hydrocarbons are formed. Avoid breathing products being released in the fire environment - they may be hazardous for health.

5.3. Advice for firefighters

Proceed in accordance with procedures applicable for extinguishing chemical fire. In the case of fire involving great amounts of the product, remove all bystanders not participating in action; call emergency brigades and the Fire Brigade.

Cool the containers exposed to fire or high temperature with water spray from a safe distance, if possible and remove them from the endangered area.

Prevent the wastewater after fire extinguishing from penetrating sewage and water tanks. Remove wastewater and residue after firefighting in accordance with valid regulations.

People participating in the fire-extinguishing action should be properly trained, equipped with a full protective clothing and a self-containing breathing apparatus.

SECTION 6. ACCIDENTAL RELEASE MEASURES

6.1. Personal precautions, protective equipment and emergency procedures

Use individual protection measures – see section 8 of the Safety Data Sheet.

Limit the access of bystanders to the endangered area until proper cleaning operations are finished. In the case of great leakage isolate the endangered area. Ensure that breakdown and its results are eliminated by a properly trained staff only.

Avoid contact with the eyes, skin and clothes. Do not inhale vapours or mist. If release occurred in closed area, ensure adequate ventilation.

NOTE: Spilled oils can make surfaces slippery.

Remove ignition sources, extinguish open fire, do not smoke.

6.2. Environmental precautions

If it is possible and safe, stop or limit product release. Limit spreading of the great leakages by embanking the area. Prevent the product from penetrating drains, waters or soil. Notify respective authorities (occupational safety and hygiene, emergency brigades, environmental brigades and organs of administration).

6.3. Methods and material for containment and cleaning up

Cover up small spillage with non-flammable, neutral absorbent material (sand, soil, diatomic earth, vermiculite) and collect in an appropriate, closed, labelled waste bin. Clean the contaminated area with water with detergent, and then rinse with water. Pump off large amounts of liquid. Dispose of according to the applicable regulations. If necessary, obtain help from specialist companies dealing with waste transport and utilisation in order to remove the product/absorbent material contaminated with the product.

6.4. Reference to other sections

See also sections 8 and 13 of the Safety Data Sheet.

SECTION 7. HANDLING AND STORAGE

7.1. Precautions for safe handling

Intoxication prevention: Prevent formation of vapour/fog concentration exceeding the acceptable

MATERIAL SAFETY DATA SHEET

In accordance with Regulation (EU) No 1907/2006 with later amendments

TRANSOL SP 68 -1000

Made on: 06.03.2006

Updated on: 21.12.2012

Version: 3

Page 4 of 9

occupational exposure limits. Provide effective ventilation. Avoid contact with the eyes, skin and clothes. Avoid vapour and fog inhalation. Keep unused containers tightly closed.

Essential hygiene rules should be observed: do not eat, drink or smoke during work, wash hands with soapy water after work/after break in work. Do not use contaminated clothing; Immediately remove contaminated clothing and wash before reuse. NOTE: Take off contaminated/soaked clothes and remove it to a safe place, far from heat and ignition sources. Use individual protection measures in accordance with the information contained in section 8 of the Safety Data Sheet.

Fire and explosion prevention: Do not use open fire, do not smoke, eliminate other ignition sources.

7.2. Conditions for safe storage, including any incompatibilities

Store in tightly sealed and properly labelled containers, in a cool, well ventilated place with a non-absorbing ground. The product may be stored in storage tanks in accordance with applicable regulations. Store far from heat sources, protect from direct sunlight. Protect against contamination and water accumulation. Keep away from strong oxidisers.

7.3. Specific end use(s)

None.

SECTION 8. EXPOSURE CONTROL AND PERSONAL PROTECTION EQUIPMENT

8.1. Control parameters

For the product – no data, for similar products – mineral oils:

Mineral oils (liquid phase of aerosol)* TLV-TWA: 5 mg/m³, TLV-STEL: 10 mg/m³, TLV-C: –

- In conditions where vapours and fumes are generated – not applicable

Directive of the Minister of Work and Social Policy dated November 29th, 2002 on the maximum occupational levels of factors hazardous to health at the workplace (Dz.U. No.217, item 1833; of 2005 Dz.U. No.212, item 1769, of 2007 Dz.U. No.161, item 1142; of 2009 Dz.U. No.105, item 873; of 2010 Dz.U. No.141, item 950)

DNEL_{worker} (inhalation, chronic toxicity) 5.4 mg/m³/8h (aerosol)

DNEL_{consumer} (inhalation, chronic toxicity) 1.2 mg/m³/24h (aerosol)

PNEC_{water, sediment, soil, sewage treatment} Not applicable (a substance does not pose a hazard to the environment)

PNEC (oral, mammals) 9.33 mg/kg food

8.2. Exposure controls

Recommended methods of exposure assessment in the air:

- PN-Z-04008-7:2002 – "Air purity protection -- Sampling methods -- Principles of air sampling in work place and interpretation of results"

- PN-Z-04108-6:2006 „Air purity protection -- Determination of mineral oil (liquid phase aerosol) in work places by absorption spectrometry method in ultra-violet ”.

-PN-Z-04108-5:2006 „Air purity protection -- Tests for content of oils -- Determination of mineral oil (liquid phase of aerosol) in work places by absorption spectrometry method in infra-red”

Appropriate engineering controls:

General ventilation and/or local fume hood in order to maintain hazardous agent concentration in air below acceptable limits. Local fume hood is preferred, since it enables emission control at source and prevents spreading throughout the working area.

Eye or face protection:

Tight safety eyeglasses (goggles) in the case of prolonged exposure or the risk of liquid splashing to the eye. It is recommended to equip the workplace with a water shower to flush eyes.

Skin protection:

Wear impermeable, oil resistant gloves (e.g. perbutane, viton, butyl rubber). Glove material should be selected with consideration to the breakthrough time, permeability rate and degradation. It is recommended to change gloves regularly and replace them immediately if any signs of wear or damage (tearing, puncture) or changes in appearance (colour, flexibility, shape) occur. Wear protective apron or protective suit made of coated, product-resistant fabrics; oil-resistant, anti-slippery shoes.

Respiratory protection:

Not required under normal conditions of use. In the case of exceeding the acceptable limits or inadequate

MATERIAL SAFETY DATA SHEET

In accordance with Regulation (EU) No 1907/2006 with later amendments

TRANSOL SP 68 -1000

Made on: 06.03.2006

Updated on: 21.12.2012

Version: 3

Page 5 of 9

ventilation use the approved respirator equipped with a suitable filter or filter-absorber. For activities in the limited space / insufficient oxygen content in air / high uncontrolled emission / any circumstances, in which the mask does not provide adequate protection, use self-contained breathing apparatus.

Thermal hazards:

Not applicable

Environmental exposure controls:

Consider using precautionary measures in order to protect the area around storage tanks.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on basic physical and chemical properties

a) Appearance	: Liquid, colour from yellow to brown
b) Odour	: characteristic for hydrocarbons
c) Odour threshold	: No data available
d) pH	: Not applicable
e) Melting/solidification temperature	: max. - 6°C (pour point)
f) Initial boiling temperature and melting temperature range	: No data available
g) Ignition point	: >200°C
h) Evaporation rate	: No data
i) Flammability (solid, gas)	: Not applicable
j) Upper/lower flammability limit or upper/lower explosion limit	: Not applicable
k) Vapour pressure	: No data
l) Vapour density	: No data
m) Relative density	: approx.0.900 g/cm ³ at 15°C
n) Solubility	: Insoluble in water. Soluble in hydrocarbon solvents
o) Distribution coefficient n-octanol/ water	: Not determined
p) Self-ignition point	: Not determined
q) Decomposition temperature	: No data available
r) Viscosity	: 61,2 - 1100 mm ² /s at 40°C
s) Explosive properties	: Not applicable
t) Oxidizing properties	: Not applicable

9.2. Other information

Surface tension : Not applicable

SECTION 10. STABILITY AND REACTIVITY

10.1. Reactivity

The product is not reactive.

10.2. Chemical stability

The product is stable under normal ambient conditions, as well as under the expected temperature and under the expected pressure at storage and at handling.

10.3. Possibility of hazardous reactions

None known.

10.4. Conditions to avoid:

High temperature, open flame and other ignition sources.

10.5. Incompatible materials

Strong oxidisers.

10.6. Hazardous decomposition products

None known. Hazardous combustion products – see section 5 of the Safety Data Sheet.

MATERIAL SAFETY DATA SHEET

In accordance with Regulation (EU) No 1907/2006 with later amendments

TRANSOL SP 68 -1000

Made on: 06.03.2006

Updated on: 21.12.2012

Version: 3

Page 6 of 9

SECTION 11. TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

Acute toxicity: (no data available for the product; information for similar products – base oils)

LD50: >5000 mg/kg (oral, rat)

LC50: >5.53 mg/l (inhalation, rat)

LD50: >5000 mg/kg (skin, rabbit)

Skin corrosion/irritation:

Classification criteria have not been met based on the available data. Causes skin cracking and desquamation resulting from drying and degreasing, irritation or inflammation possible at prolonged or frequent contact. According to the statement made by the manufacturer of a substance the oil formulated with this additive does not cause skin sensitization.

Serious eye damage/irritation:

Classification criteria have not been met based on the available data. High concentrations of vapours/mist or liquid splashing to the eye may cause irritation of eye mucosa (burning, tearing and redness) or transient eye irritation.

Respiratory or skin sensitisation:

Classification criteria have not been met based on the available data. Causes mild skin irritation, redness, skin drying and cracking, dermatological changes possible at frequent or prolonged contact. According to the statement made by the manufacturer of a substance the oil formulated with this additive does not cause skin sensitization.

Germ cell mutagenicity:

Classification criteria have not been met based on the available data.

Carcinogenicity:

Classification criteria have not been met based on the available data. Based on L Note the substance is not classified as carcinogenic (DMSO extract content (according to IP 346) < 3%).

Reproductive toxicity:

Classification criteria have not been met based on the available data.

STOT – single exposure:

Classification criteria have not been met based on the available data.

Accidental ingestion may cause gastric disturbances (nausea, vomiting, stomach pain); irritation of the gastrointestinal tract. High concentrations of vapours/mist may cause moderate irritation of the respiratory tract mucosa (sore throat, cough), headache, dizziness and nausea; at prolonged exposure breathing disturbances, central nervous system disorders, disturbances in the coordination of movements, disorientation, drowsiness, loss of consciousness.

STOT – repeated exposure:

Classification criteria have not been met based on the available data. Repetitive or prolonged exposure may cause drying, cracking or chronic inflammation of the skin. Prolonged exposure to vapours may cause neurotoxic disorders.

Aspiration hazard:

Classification criteria have not been met based on the available data. Viscosity $\geq 20.5 \text{ mm}^2/\text{s}$ at 40°C.

SECTION 12. ECOLOGICAL INFORMATION

12.1. Toxicity:

Aquatic environment: for the product – no data,

Data for similar oils - base oils:

EC50: >10000 mg/l – acute toxicity test on fresh-water invertebrates; *Daphnia magna*, 48h

NOEL: 100 mg/l – chronic toxicity test on invertebrates; *Daphnia magna*, 21 days

EC50: >100 mg/l – acute toxicity test on fresh-water algae; *Pseudokirchinella subcapitata*, 72h

LC50: >100 mg/l – acute toxicity test on fresh-water fish; *Pimephales promelas*, 96h

NOEL: >1000 mg/l – chronic toxicity test on fresh-water fish; *Oncorhynchus mykiss*, QSAR, 28 days

MATERIAL SAFETY DATA SHEET

In accordance with Regulation (EU) No 1907/2006 with later amendments

TRANSOL SP 68 -1000

Made on: 06.03.2006

Updated on: 21.12.2012

Version: 3

Page 7 of 9

Sediment:

Toxicity test on sediment microorganisms: none (test scientifically unjustifiable)

Land environment:

Toxicity test on invertebrates: none (test scientifically unjustifiable)

Toxicity test on plants: none (test scientifically unjustifiable)

Toxicity test on birds: none (test scientifically unjustifiable)

12.2. Persistence and degradability

Biotic:

No specific data available

Abiotic:

Hydrolysis as pH function: no data available

Photolysis/ photo-transformation: no data available

12.3. Bioaccumulative potential

No specific data available

12.4. Mobility in soil

Adsorption/ desorption test – no data available

12.5. Results of PBT and vPvB assessment

Mixture ingredients – no data available.

12.6. Other adverse effects

Product of very low volatility. Hydrocarbons of which this product is composed have low tendency or no tendency to penetrate to the atmosphere. The product is insoluble in water and lighter than water. The product accumulates on the surface of water, forming a film that hinders oxygen exchange. Hydrocarbons of higher molecular mass may be sedimented in water. The product is limitedly dispersed in soil; it may penetrate into soil and contaminate surface waters.

SECTION 13. HANDLING OF WASTES

13.1. Waste treatment methods

Waste code: 13 02 05 - Mineral-based non-chlorinated engine, gear and lubricating oils.

NOTE: Since waste code is assigned based on the source of origin, the end user should define the obtained wastes and assign a proper code, taking into consideration specific conditions of use, in accordance with applicable regulations.

Soaked clothes, papers or other organic materials should be collected and utilised in an controlled way.

Do not dispose to sewer. Avoid contamination of surface and ground waters. Consider reuse. Waste product should be recovered or utilised at professional, approved furnaces or waste recycling/neutralization facilities, in accordance with applicable regulations.

Recovery / recycling / utilisation of package wastes should be performed according to the applicable regulations. NOTE: Only completely emptied and cleaned packages may be returned for recycling. Use services of authorised companies.

The Act of 27 April 2001 on wastes (Dz.U. no. 62, item 628 with amendments)

The Act of 11 May 2001 on packages and package wastes (Dz.U. No. 63, item 638 with amendments)

Regulation of the Minister of Environment of 27 September 2001, on wastes catalogue (Dz. U. No.112, item 1206 with amendments)

SECTION 14. TRANSPORT INFORMATION

The substance is not a subject to transport regulations on hazardous goods included in ADR (road transport), RID (rail transport), IMDG (marine transport) and ICAO/IATA (air transport).

14.1. UN number

Not applicable

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

Not applicable

14.6. Special precautions for users

Not applicable

MATERIAL SAFETY DATA SHEET

In accordance with Regulation (EU) No 1907/2006 with later amendments

TRANSOL SP 68 -1000

Made on: 06.03.2006

Updated on: 21.12.2012

Version: 3

Page 8 of 9

14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code Not applicable

SECTION 15. REGULATORY INFORMATION

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

The Act of 25 February 2011 on chemical substances and preparations (Dz.U. of 2011 No. 63, item 322)

Regulation (EC) No.1907/2006 of the European Parliament and of the Council of 18 December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH) and establishing a European Chemicals Agency and 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 (correction OJ L 136 of 29 May 2007 with amendments)

Regulation of the (UE) Commission no. 453/2010 of 20 May 2010 amending the Regulation (EC) No. 1907/2006 of the European Parliament and Council dated December 18, 2006 on registration, evaluation, granting of permissions and restrictions applied in scope of chemicals (REACH) (OJ L 133 of 31.05.2010)

Regulation (UE) of the European Parliament and Council no. 1272/2008 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 the Regulation (EC) No. 1907/2006 (EU OJ L No.353 dated 31.12.2008 with amendments)

Regulation of the Minister of Health of 2 September 2003, on the criteria and classification chemical substances and preparations (Dz. U. of 2003 No.171, item 1666; of 2004 No.243, item 2440; of 2007 No.174, item 1222; of 2009 No.43, item 353)

Regulation of the Minister of Work and Social Policy of 20 April 2005 on testing and measurements of factors hazardous to health at the workplace (Dz.U. of 2005 No.73, item 645; of 2007 Dz.U. No.241, item 1772)

Regulation of the Minister of Economy of 21 December 2005, on the basic requirements for personal protection measures (Dz. U. of 2005 No.259, item 2173)

Regulation of the Council of Ministers of 24 August 2004 on the list of jobs prohibited for young workers and the circumstances in which they might be employed in some of these jobs (Dz.U. of 2004 No.200, item 2047; of 2005 No.136, item 1145; of 2006 No.107, item 724)

Regulation of the Council of Ministers of 10 September 1996 on the list of jobs that are prohibited for women (Dz.U. of 1996 No.114, item 545, of 2002 No.127, item 1092)

Regulation of the Minister of Health and Social Policy of 30 May 1996 on conducting the medical examinations of employees, range of medical prevention and medical decisions given on the purposes specified in the Labour Code (Dz. U. of 1996 No.69, item 332; of 1997 No. 60, item 375; of 1998 No.159, item 1057; of 2001 No.37, item 451; No.128, item 1405)

Regulation of the Minister of Labour and Social Policy of 26 September 1997 on general regulations for hygiene and safety at work (consolidated text Dz.U. of 2003 No.169, item 1650; of 2007 No.49, item 330; of 2008 No.108, item 690)

Regulation of the Minister of Health of 30 December 2004 on safety and hygiene of work related to chemical factors present at the workplace (Dz.U. of 2005 No.11, item 86; of 2008 No.203, item 1275)

The Act of 24 August 1991 on fire protection (consolidated text – appendix to Dz.U. of 2002 No.147, item 1229; of 2003 No.52, item 452; of 2004 No.96, item 959; of 2005 No.100, item 835 and 836; of 2006 No.191, item 1410; of 2007 No.89, item 590; of 2008 No.163, item 1015; of 2009 No.11, item 59)

Act of 31 March 2004, on railway transport of hazardous substances (Dz. U. of 2004 No.97, item 962; of 2005 No.141, item 1184; of 2006 No.249, item 1834; of 2007 No.176, item 1238)

Regulations for the International Rail Transport of Hazardous Goods RID (of 2009 Dz.U. No.167, item 1318)

15.2. Chemical safety assessment

No data for chemical safety evaluation results for substances contained in a mixture.

SECTION 16. OTHER INFORMATION

Update range:

Changes in sections: 1,4, 2,1, 2,2, 3,2, 8,1, 9,1 , 15,1, 16.

Abbreviations and acronyms in the Safety Data Sheet

TLV-TWA	Threshold Limit Value
TLV-STEL	Threshold Limit Value, Short Term Exposure Limit
TLV-C	Ceiling exposure limit
vPvB	very Persistent, very Bioaccumulative (substance)
PBT	Persistent, bioaccumulative, and toxic (substance)
PNEC	Predicted No Effect Concentration
DN(M)EL	Derived No Effect Level
LD ₅₀	Dose that will kill 50% of the test animals
LC ₅₀	Concentration that will kill 50% of the test animals
EC _x	Concentration at which x% inhibition of growth or growth rate is observed
LOEC	Lowest Observed Effect Concentration

MATERIAL SAFETY DATA SHEET

In accordance with Regulation (EU) No 1907/2006 with later amendments

TRANSOL SP 68 -1000

Made on: 06.03.2006

Updated on: 21.12.2012

Version: 3

Page 9 of 9

NOEL	No Observed Effect Concentration
RID	Regulations Concerning the International Carriage of Dangerous Goods by Rail
ADR	Agreement on Dangerous Goods by Road
IMDG	International Maritime Transport of Dangerous Goods
IATA	International Air Transport Association
UVCB	Unknown substances, of Variable Composition, or of Biological Origin

References:

Legal regulations quoted in sections 2 – 15 of the Safety Data Sheet.

No data on chemical safety assessment report for the substance mixture.

The list of applicable R-phrases, hazard statements, S-phrases or precautionary statements not specified in whole in sections 2-15 of the Safety Data Sheet.

The list of applicable R-phrases

R22 - Harmful if swallowed.

R41 - Risk of serious damage to eye.

R43 - May cause sensitization by skin contact.

R51/53 - Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

DSD/DSP classification

Xn - harmful

N – dangerous for environment

The list of applicable H-phrases

H226 - Flammable liquid and vapor.

H302 - Harmful if swallowed.

H317 - May cause an allergic skin reaction.

H318 - Causes serious eye damage.

H411 - Toxic to aquatic life with long lasting effects.

The list of applicable CLP classification phrases

Flam. Liq. 3 – Flammable liquid substance, cat. 3.

Aquatic Chronic 2 - Hazardous to aquatic environment, cat. 2 (chronic)

Acute Tox. 4 – Acute toxicity, cat. 4

Eye Dam. 1 – Serious eye damage/ irritant to eyes, cat. 1

Skin Sens. 1 – Skin sensitization, cat. 1

Advice on training for employees:

Employees who use the product should be trained on risks for health, hygiene, use of individual protection, accident preventive actions, rescue actions, etc.,

This MSDS is not a quality certificate for the product. All data presented in this sheet are to be taken only as a help in safe handling in transport, distribution, use and storage. Persons handling the product should be informed about risks and precautionary measures. Information in the Safety Data Sheet relates to the above mentioned product and its specified uses only. They may be obsolete or insufficient for this product used in conjunction with other materials or in different applications than those specified in the Safety Data Sheet.

The user is obliged to follow all applicable standards and regulations and is also responsible for inappropriate use of information contained in this sheet or for an inappropriate use of the product. In the case of special applications evaluate exposure and develop the appropriate procedure and training programs in order to ensure safety at work.
