

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

1.1 Product identifier

Product name : DYNATRANS DA 80W-90
Product code : 36470
Product description : Not available.
Product type : Liquid.
Other means of identification : Not available.

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

Identified uses

Transmission fluids
Formulation additives, lubricants and greases - Industrial
General use of lubricants and greases in vehicles or machinery - Industrial
General use of lubricants and greases in vehicles or machinery - Professional

Uses advised against

Not applicable.

1.3 Details of the supplier of the safety data sheet

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H.S.E

1.4 Emergency telephone number

National advisory body/Poison Centre

Telephone number : National Poisons Information Service (NPIS): 111

Supplier

Telephone number : Emergency telephone: +44 1235 239670

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Product definition : Mixture

Classification according to Regulation (EC) No. 1272/2008 [CLP/GHS]

Aquatic Chronic 3, H412

The product is classified as hazardous according to UK CLP Regulation SI 2019/720 as amended.

See Section 16 for the full text of the H statements declared above.

See Section 11 for more detailed information on health effects and symptoms.

2.2 Label elements

Signal word : No signal word.

Hazard statements : H412 - Harmful to aquatic life with long lasting effects.

Precautionary statements

Prevention : P273 - Avoid release to the environment.

Response : Not applicable.

Storage : Not applicable.

Disposal : P501 - Dispose of contents and container in accordance with all local, regional, national and international regulations.

Supplemental label elements :  Contains Reaction products of 4-methyl-2-pentanol and diphosphorus pentasulfide, propoxylated, esterified with diphosphorus pentaoxide, and salted by amines, C12-14-tert-alkyl and formaldehyde reaction products with phenol heptyl derivs. and 1,3,4-thiadiazolidine-2,5-dithione. May produce an allergic reaction.

Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles : Not applicable.

2.3 Other hazards

Product meets the criteria for PBT or vPvB according to Regulation (EC) No. 1907/2006, Annex XIII  This mixture does not contain any substances that are assessed to be a PBT or a vPvB in a concentration $\geq 0,1$ %.

Other hazards which do not result in classification :  This product contains substance(s), present at a concentration equal to or greater than 0.1% by mass, known to have endocrine disrupting properties included in the list drawn up in accordance in Article 59 of the REACH Regulation or in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605.
Reaction product of 1,3,4-thiadiazolidine-2,5-dithione, formaldehyde and phenol, heptyl derivs.; EC: 939-460-0: Endocrine disrupting properties (Environment).
Hazard of slipping on spilt product.

SECTION 3: Composition/information on ingredients

3.2 Mixtures : Mixture

Product/ingredient name	Identifiers	%	Classification	Type
Distillates (petroleum), hydrotreated heavy paraffinic	REACH #: 01-2119484627-25 EC: 265-157-1 CAS: 64742-54-7 Index: 649-467-00-8	≤3	Asp. Tox. 1, H304	[1]
Reaction products of 4-methyl-2-pentanol and diphosphorus pentasulfide, propoxylated, esterified with diphosphorus pentaoxide, and salted by amines, C12-14-tert-alkyl	REACH #: 01-2119493620-38 EC: 931-384-6	≤3	Acute Tox. 4, H302 Eye Irrit. 2, H319 Skin Sens. 1B, H317 Aquatic Chronic 2, H411	[1]
Reaction products of alcohols, c14-18, c18 unsat, esterified with phosphorus pentoxide and with amines, c12-14, tert-alkyl	REACH #: 01-2119978530-33 EC: 939-591-3 CAS: 1471315-74-8	≤3	Aquatic Chronic 3, H412	[1]
C16-18-(even numbered, saturated and unsaturated)-alkylamines	REACH #: 01-2119473797-19 EC: 627-034-4 CAS: 1213789-63-9	<1	Acute Tox. 4, H302 Skin Corr. 1B, H314 Eye Dam. 1, H318 STOT SE 3, H335 STOT RE 2, H373 Asp. Tox. 1, H304 Aquatic Acute 1, H400 (M=10) Aquatic Chronic 1, H410 (M=10)	[1]
formaldehyde reaction products with phenol heptyl derivs. and 1,3,4-thiadiazolidine-2,5-dithione	EC: 939-460-0 CAS: 1471311-26-8	≤0.3	Skin Irrit. 2, H315 Eye Dam. 1, H318 Skin Sens. 1B, H317 Aquatic Chronic 3, H412 See Section 16 for the full text of the H statements declared above.	[1]

Additional information : Mineral oil of petroleum origin Product containing mineral oil with less than 3% DMSO extract as measured by IP 346

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment, are PBTs, vPvBs or Substances of equivalent concern, or have been assigned a workplace exposure limit and hence require reporting in this section.

Type

[1] Substance classified with a health or environmental hazard

Occupational exposure limits, if available, are listed in Section 8.

SECTION 4: First aid measures

4.1 Description of first aid measures

- Eye contact** : Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Get medical attention if irritation occurs.
- Inhalation** : Remove victim to fresh air and keep at rest in a position comfortable for breathing.
- Skin contact** : Wash skin thoroughly with soap and water or use recognised skin cleanser. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.
- Ingestion** : Wash out mouth with water. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Do not induce vomiting unless directed to do so by medical personnel.
- Protection of first-aiders** : No action shall be taken involving any personal risk or without suitable training.

4.2 Most important symptoms and effects, both acute and delayed

Over-exposure signs/symptoms

- Eye contact** : No specific data.
- Inhalation** : No specific data.
- Skin contact** : Adverse symptoms may include the following:
irritation
dryness
cracking
- Ingestion** : No specific data.

4.3 Indication of any immediate medical attention and special treatment needed

- Notes to physician** : Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
- Specific treatments** : No specific treatment.

SECTION 5: Firefighting measures

5.1 Extinguishing media

- Suitable extinguishing media** : Use dry chemical, CO₂, water spray (fog) or foam.
- Unsuitable extinguishing media** : Do not use water jet.

5.2 Special hazards arising from the substance or mixture

- Hazards from the substance or mixture** : In a fire or if heated, a pressure increase will occur and the container may burst. This material is harmful to aquatic life with long lasting effects. Fire water contaminated with this material must be contained and prevented from being discharged to any waterway, sewer or drain.
- Hazardous combustion products** : carbon monoxide
carbon dioxide
nitrogen oxides
phosphorus oxides
sulfur oxides
Hydrogen sulfide
Mercaptans

5.3 Advice for firefighters

SECTION 5: Firefighting measures

- Special protective actions for fire-fighters** : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.
- Special protective equipment for fire-fighters** : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

- For non-emergency personnel** : No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilt material. Put on appropriate personal protective equipment.
- For emergency responders** : If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

- 6.2 Environmental precautions** : Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air). Water polluting material. May be harmful to the environment if released in large quantities.

6.3 Methods and material for containment and cleaning up

- Small spill** :  Stop leak if without risk. Move containers from spill area. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations. Dispose of via a licensed waste disposal contractor.
- Large spill** :  Stop leak if without risk. Move containers from spill area. Approach the release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see Section 13). Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilt product. Note: see Section 1 for emergency contact information and Section 13 for waste disposal.

- 6.4 Reference to other sections** : See Section 1 for emergency contact information.
See Section 8 for information on appropriate personal protective equipment.
See Section 13 for additional waste treatment information.

SECTION 7: Handling and storage

The information in this section contains generic advice and guidance. The list of Identified Uses in Section 1 should be consulted for any available use-specific information provided in the Exposure Scenario(s).

7.1 Precautions for safe handling

- Protective measures** : Put on appropriate personal protective equipment (see Section 8). Do not ingest. Avoid contact with eyes, skin and clothing. Avoid breathing vapour or mist. Avoid release to the environment. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Empty containers retain product residue and can be hazardous. Do not reuse container.

SECTION 7: Handling and storage

Advice on general occupational hygiene : Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

7.2 Conditions for safe storage, including any incompatibilities

Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabelled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.

7.3 Specific end use(s)

Recommendations : See exposure scenarios
Industrial sector specific solutions : Not available.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Occupational exposure limits

No exposure limit value known.

Reportable hazardous constituent(s) contained in UVCB- and/or multi-constituent substance(s) complying with the classification criteria and/or with an exposure limit (OEL)

No exposure limit value known.

Biological Limit Values (BLV)

No exposure indices known.

Recommended monitoring procedures : Reference should be made to appropriate monitoring standards. Reference to national guidance documents for methods for the determination of hazardous substances will also be required.

Advisory OEL : Mineral oil mist: USA: OSHA (PEL) TWA 5 mg/m³, NIOSH (REL) TWA 5 mg/m³, STEL 10 mg/m³, ACGIH (TLV) TWA 5 mg/m³ (highly refined)

DNELs/DMELs

Product/substance	Type	Exposure	Value	Population	Effects
Distillates (petroleum), hydrotreated heavy paraffinic	DNEL	Long term Oral	0.74 mg/kg bw/day	General population	Systemic
	DNEL	Long term Dermal	0.97 mg/kg bw/day	Workers	Systemic
	DNEL	Long term Inhalation	1.19 mg/m ³	General population	Local
	DNEL	Long term Inhalation	2.73 mg/m ³	Workers	Systemic
	DNEL	Long term Inhalation	5.58 mg/m ³	Workers	Local
Reaction products of 4-methyl-2-pentanol and diphosphorus pentasulfide, propoxylated, esterified with diphosphorus pentaoxide, and salted by amines,	DNEL	Long term Dermal	12.5 mg/kg	Workers	Systemic

SECTION 8: Exposure controls/personal protection

C12-14-tert-alkyl	DNEL	Long term Inhalation	4.28 mg/m ³	Workers	Systemic
	DNEL	Long term Dermal	6.25 mg/kg	General population	Systemic
	DNEL	Long term Inhalation	1.09 mg/m ³	General population	Systemic
	DNEL	Long term Oral	0.25 mg/day	General population	Systemic
	DNEL	Long term Dermal	0.16 mg/cm ²	Workers	Local
Reaction products of alcohols, c14-18, c18 unsat, esterified with phosphorus pentoxide and with amines, c12-14, tert-alkyl	DNEL	Long term Inhalation	1.76 mg/m ³	Workers	Systemic
	DNEL	Long term Dermal	2.5 mg/kg bw/day	Workers	Systemic
	DNEL	Long term Inhalation	0.434 mg/m ³	General population	Systemic
	DNEL	Long term Dermal	1.25 mg/kg bw/day	General population	Systemic
	DNEL	Long term Oral	0.25 mg/kg bw/day	General population	Systemic
C16-18-(even numbered, saturated and unsaturated)-alkylamines	DNEL	Long term Inhalation	0.035 mg/m ³	General population	Systemic
	DNEL	Short term Inhalation	1 mg/m ³	Workers	Local
	DNEL	Long term Inhalation	1 mg/m ³	Workers	Local
	DNEL	Long term Oral	40 µg/kg bw/day	General population	Systemic
	DNEL	Long term Inhalation	0.38 mg/m ³	Workers	Systemic
formaldehyde reaction products with phenol heptyl derivs. and 1,3,4-thiadiazolidine-2,5-dithione	DNEL	Long term Inhalation	2.35 mg/m ³	Workers	Systemic
	DNEL	Long term Dermal	66.7 mg/kg bw/day	Workers	Systemic
	DNEL	Long term Inhalation	0.58 mg/m ³	General population	Systemic
	DNEL	Long term Dermal	33.33 mg/kg bw/day	General population	Systemic
	DNEL	Long term Oral	0.33 mg/kg bw/day	General population	Systemic
	DNEL	Long term Oral	0.33 mg/kg bw/day	General population	Systemic
	DNEL	Long term Inhalation	0.58 mg/m ³	General population	Systemic
	DNEL	Long term Inhalation	2.35 mg/m ³	Workers	Systemic
	DNEL	Long term Dermal	33.33 mg/kg bw/day	General population	Systemic
	DNEL	Long term Dermal	66.7 mg/kg bw/day	Workers	Systemic
	DNEL	Long term Dermal	66.7 mg/kg bw/day	Workers	Systemic

PNECs

SECTION 8: Exposure controls/personal protection

Product/substance	Compartment Detail	Value	Method Detail
Distillates (petroleum), hydrotreated heavy paraffinic Reaction products of 4-methyl-2-pentanol and diphosphorus pentasulfide, propoxylated, esterified with diphosphorus pentaoxide, and salted by amines, C12-14-tert-alkyl	Secondary Poisoning	9.33 mg/kg	-
	Fresh water	2.4 µg/l	-
	Marine water	240 ng/l	-
	Fresh water sediment	12.9 µg/kg dwt	-
	Marine water sediment	1.29 µg/kg dwt	-
	Soil	1.17 µg/kg dwt	-
	Sewage Treatment Plant	24.33 mg/l	-
	Secondary Poisoning	10 mg/kg	-
	Fresh water	0.0024 mg/l	-
	Marine water	0.00024 mg/l	-
Reaction products of alcohols, c14-18, c18 unsat, esterified with phosphorus pentoxide and with amines, c12-14, tert-alkyl	Fresh water sediment	1085.06 mg/kg dwt	-
	Marine water sediment	108.51 mg/kg dwt	-
	Soil	880.82 mg/kg dwt	-
	Sewage Treatment Plant	32 mg/l	-
	Marine water	0.000026 mg/l	-
	Fresh water sediment	3.76 mg/kg dwt	-
	Marine water sediment	0.376 mg/kg dwt	-
	Soil	10 mg/kg	-
	Sewage Treatment Plant	0.55 mg/l	-
	Fresh water	0.026 mg/l	-
C16-18-(even numbered, saturated and unsaturated)-alkylamines	Marine water	0.0026 mg/l	-
	Fresh water sediment	1108.6 mg/kg dwt	-
	Marine water sediment	110.86 mg/kg dwt	-
	Soil	221.48 mg/kg dwt	-
	Sewage Treatment Plant	45.5 mg/l	-
	Fresh water	0.026 mg/l	-
	Marine water	0.0026 mg/l	-
	Fresh water sediment	1108.6 mg/kg dwt	-
	Marine water sediment	110.86 mg/kg dwt	-
	Soil	221.48 mg/kg dwt	-
formaldehyde reaction products with phenol heptyl derivs. and 1,3,4-thiadiazolidine-2,5-dithione	Sewage Treatment Plant	45.5 mg/l	-
	Fresh water	0.026 mg/l	-
	Marine water	0.0026 mg/l	-
	Fresh water sediment	1108.6 mg/kg dwt	-
	Marine water sediment	110.86 mg/kg dwt	-
	Soil	221.48 mg/kg dwt	-
	Sewage Treatment Plant	45.5 mg/l	-
	Fresh water	0.026 mg/l	-
	Marine water	0.0026 mg/l	-
	Fresh water sediment	1108.6 mg/kg dwt	-

8.2 Exposure controls

Appropriate engineering controls : Good general ventilation should be sufficient to control worker exposure to airborne contaminants.

Individual protection measures

Hygiene measures : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

Eye/face protection : In case of contact through splashing: safety glasses with side-shields, EN 166.

Skin protection

SECTION 8: Exposure controls/personal protection

- Hand protection** : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.
- Hydrocarbon-proof gloves
nitrile rubber
Fluorinated rubber
- Please observe the instructions regarding permeability and breakthrough time which are provided by the supplier of the gloves. Also take into consideration the specific local conditions under which the product is used, such as the danger of cuts, abrasion, and the contact time.
- In case of prolonged contact with the product, it is recommended to wear gloves complying with ISO 21420 and EN 374 standards, protecting at least for 480 minutes and having a thickness of 0,38 mm at least. These values are indicative only. The level of protection is provided by the material of the glove, its technical characteristics, its resistance to the chemicals to be handled, the appropriateness of its use and its replacement frequency
- Body protection** : ☒ Wear work clothing with long sleeves.
Non-skid safety shoes or boots
- Respiratory protection** : ☒ Ensure adequate ventilation and check that a safe, breathable atmosphere is present before entry into confined spaces. In case of inadequate ventilation wear respiratory protection: Type A/P1. Warning ! filters have a limited use duration. The use of breathing apparatus must comply strictly with the manufacturer's instructions and the regulations governing their choices and uses.
- Environmental exposure controls** : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

SECTION 9: Physical and chemical properties

The conditions of measurement of all properties are at standard temperature (20°C / 68°F) and pressure (1013 hPa) unless otherwise indicated

9.1 Information on basic physical and chemical properties

Appearance

- Physical state** : Liquid.
- Colour** : Brown.
- Odour** : Characteristic.
- Melting point/freezing point** : Technically not possible to measure
- Initial boiling point and boiling range** : >300°C (>572°F) [ISO 3405]
- Flammability (solid, gas)** : Not applicable.
- Upper/lower flammability or explosive limits** : Lower: 0.9%
Upper: 7%
- Flash point** : Open cup: 222°C (431.6°F) [ISO 2592]
- Auto-ignition temperature** : >250°C (>482°F) [ASTM E 659]
- Decomposition temperature** : Not applicable.
- pH** : Not applicable. Product is non-soluble (in water).

SECTION 9: Physical and chemical properties

Viscosity : Kinematic (40°C): 1.43 cm²/s [ASTM D 445]

Solubility(ies) :

Media	Result
water	Not soluble

Miscible with water : No.

Partition coefficient: n-octanol/ water : Not applicable.

Vapour pressure : <0.013 kPa (<0.1 mm Hg) [room temperature]
Not applicable. [50°C (122°F)]

Relative density : 0.901 [ISO 12185]

Density : 0.901 g/cm³ [15°C (59°F)] [ISO 12185]

Vapour density : >2 [Air = 1]

Particle characteristics

Median particle size : Not applicable.

9.2 Other information

SECTION 10: Stability and reactivity

10.1 Reactivity : No specific test data related to reactivity available for this product or its ingredients.

10.2 Chemical stability : Stable under recommended storage and handling conditions (see Section 7).

10.3 Possibility of hazardous reactions : Under normal conditions of storage and use, hazardous reactions will not occur.

10.4 Conditions to avoid : Keep away from heat, hot surfaces, sparks, open flames and other ignition sources.
No smoking.

10.5 Incompatible materials :  Strong oxidising agents

10.6 Hazardous decomposition products : carbon monoxide
carbon dioxide
nitrogen oxides
phosphorus oxides
sulfur oxides
Hydrogen sulfide
Mercaptans

SECTION 11: Toxicological information

11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008

Acute toxicity

SECTION 11: Toxicological information

Product/substance	Result	Species	Dose	Exposure	Test
Distillates (petroleum), hydrotreated heavy paraffinic	LC50 Inhalation Dusts and mists	Rat - Male, Female	>5 mg/l	4 hours	OECD 403 Read across
	LD50 Dermal	Rabbit - Male, Female	>5000 mg/kg	-	OECD 402 Read across
	LD50 Oral	Rat - Male, Female	>5000 mg/kg	-	OECD 401 Read across
Reaction products of 4-methyl-2-pentanol and diphosphorus pentasulfide, propoxylated, esterified with diphosphorus pentaoxide, and salted by amines, C12-14-tert-alkyl	LC50 Inhalation Dusts and mists	Rat	5.1 mg/l	4 hours	-
	LC50 Inhalation Vapour	Rat	80.4 mg/l	1 hours	-
	LC50 Inhalation Vapour	Rat	20.1 mg/l	4 hours	-
	LD50 Dermal	Rabbit	2201 mg/kg	-	-
	LD50 Oral	Rat	2000 mg/kg	-	OECD 401
Reaction products of alcohols, c14-18, c18 unsat, esterified with phosphorus pentoxide and with amines, c12-14, tert-alkyl	LD50 Dermal	Rabbit	>2000 mg/kg	-	OECD 402
	LD50 Oral	Rat - Female	>2000 mg/kg	-	OECD 420
	LC50 Inhalation Dusts and mists	Rat - Male	>0.099 mg/l	1 hours	OECD
C16-18-(even numbered, saturated and unsaturated)-alkylamines	LD50 Dermal	Rabbit - Male, Female	>2000 mg/kg	-	OECD 402
	LD50 Oral	Rat - Male, Female	1689 mg/kg	-	OECD 401
	LD50 Dermal	Rat	>2000 mg/kg	-	OECD 402
formaldehyde reaction products with phenol heptyl derivs. and 1,3,4-thiadiazolidine-2,5-dithione	LD50 Oral	Rat	>2000 mg/kg	-	-

Acute toxicity estimates

Product/substance	Oral (mg/kg)	Dermal (mg/kg)	Inhalation (gases) (ppm)	Inhalation (vapours) (mg/l)	Inhalation (dusts and mists) (mg/l)
DYNATRANS DA 80W-90	123076.9	N/A	N/A	N/A	N/A
Reaction products of 4-methyl-2-pentanol and diphosphorus pentasulfide, propoxylated, esterified with diphosphorus pentaoxide, and salted by amines, C12-14-tert-alkyl	2000	2201	N/A	20.1	5.1
C16-18-(even numbered, saturated and unsaturated)-alkylamines	1689	N/A	N/A	N/A	N/A

Conclusion/Summary : Based on available data, the classification criteria are not met.

Irritation/Corrosion

SECTION 11: Toxicological information

Product/substance	Result	Species	Score	Exposure	Test
C16-18-(even numbered, saturated and unsaturated)-alkylamines	Eyes - Severe irritant	Rabbit	-	-	OECD 405
	Skin - Visible necrosis	Rabbit	-	-	OECD 404

Conclusion/Summary

- Skin** : Based on available data, the classification criteria are not met.
- Eyes** : Based on available data, the classification criteria are not met.
- Respiratory** : Based on available data, the classification criteria are not met.

Sensitisation

Product/substance	Route of exposure	Species	Result
C16-18-(even numbered, saturated and unsaturated)-alkylamines	skin	Guinea pig	Not sensitizing

Conclusion/Summary

- Skin** : Based on available data, the classification criteria are not met. Contains sensitizer. May produce an allergic reaction.
- Respiratory** : Based on available data, the classification criteria are not met.

Mutagenicity

Product/substance	Test	Experiment	Result
C16-18-(even numbered, saturated and unsaturated)-alkylamines	OECD 471	Experiment: In vitro Subject: Bacteria	Negative

- Conclusion/Summary** : Based on available data, the classification criteria are not met.

Carcinogenicity

- Conclusion/Summary** : Based on available data, the classification criteria are not met.

Reproductive toxicity

Product/substance	Maternal toxicity	Fertility	Developmental toxin	Species	Dose	Exposure
C16-18-(even numbered, saturated and unsaturated)-alkylamines	Negative	Negative	Negative	Rat - Male, Female	Oral	-

- Conclusion/Summary** : Based on available data, the classification criteria are not met.

Teratogenicity

Product/substance	Result	Species	Dose	Exposure
C16-18-(even numbered, saturated and unsaturated)-alkylamines	Negative - Oral	Rabbit - Male, Female	>30 mg/kg NOAEL	-

- Conclusion/Summary** : Based on available data, the classification criteria are not met.

Specific target organ toxicity (single exposure)

SECTION 11: Toxicological information

Product/substance	Category	Route of exposure	Target organs
C16-18-(even numbered, saturated and unsaturated)-alkylamines	Category 3	-	Respiratory tract irritation

Conclusion/Summary : Based on available data, the classification criteria are not met.

Specific target organ toxicity (repeated exposure)

Product/substance	Category	Route of exposure	Target organs
C16-18-(even numbered, saturated and unsaturated)-alkylamines	Category 2	-	-

Conclusion/Summary : Based on available data, the classification criteria are not met.

Aspiration hazard

Product/substance	Result
Distillates (petroleum), hydrotreated heavy paraffinic C16-18-(even numbered, saturated and unsaturated)-alkylamines	ASPIRATION HAZARD - Category 1 ASPIRATION HAZARD - Category 1

Conclusion/Summary : Based on available data, the classification criteria are not met.

Information on likely routes of exposure : Not available.

Potential acute health effects

Eye contact : No known significant effects or critical hazards.
Inhalation : No known significant effects or critical hazards.
Skin contact : Defatting to the skin. May cause skin dryness and irritation.
Ingestion : No known significant effects or critical hazards.

Symptoms related to the physical, chemical and toxicological characteristics

Eye contact : No specific data.
Inhalation : No specific data.
Skin contact : Adverse symptoms may include the following:
irritation
dryness
cracking
Ingestion : No specific data.

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Short term exposure

Potential immediate effects : Not available.
Potential delayed effects : Not available.

Long term exposure

Potential immediate effects : Not available.
Potential delayed effects : Not available.

Potential chronic health effects

SECTION 11: Toxicological information

Product/substance	Result	Species	Dose	Exposure
C16-18-(even numbered, saturated and unsaturated)-alkylamines	Sub-acute LOAEL Dermal	Rat - Male, Female	12.5 mg/kg	-
	Sub-acute NOAEL Oral	Rat - Male, Female	3.25 mg/kg	-

Conclusion/Summary	: Not available.
General	: No known significant effects or critical hazards.
Carcinogenicity	: No known significant effects or critical hazards.
Mutagenicity	: No known significant effects or critical hazards.
Reproductive toxicity	: No known significant effects or critical hazards.

11.2 Information on other hazards

11.2.1 Endocrine disrupting properties

This product does not contain any substance present at a concentration equal to or greater than 0.1% by mass, included in the list drawn up in accordance with article 59, paragraph 1 of the REACH Regulation, due to its endocrine disrupting properties, or a substance known to have endocrine disrupting properties in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation 2018/605.

11.2.2 Other information

Not available.

SECTION 12: Ecological information

Harmful to aquatic life with long lasting effects.

Expert judgment

12.1 Toxicity

Product/substance	Result	Species	Exposure	Test
Distillates (petroleum), hydrotreated heavy paraffinic	Acute EC50 >100 mg/l	Algae - <i>Pseudokirchneriella subcapitata</i>	72 hours	OECD 201
	Acute EC50 >10000 mg/l	Crustaceans - <i>Daphnia magna</i>	48 hours	OECD 202
	Chronic NOEL >100 mg/l	Algae - <i>Pseudokirchneriella subcapitata</i>	72 hours	OECD 201
Reaction products of 4-methyl-2-pentanol and diphosphorus pentasulfide, propoxylated, esterified with diphosphorus pentaoxide, and salted by amines, C12-14-tert-alkyl	Chronic NOEL >1000 mg/l	Crustaceans - <i>Daphnia magna</i>	21 days	-
	Acute EC50 6.4 mg/l	Algae - <i>Pseudokirchneriella subcapitata</i>	96 hours	OECD 201
	Acute EL50 91.4 mg/l	Crustaceans - <i>Daphnia magna</i>	48 hours	OECD 202
	Acute LL50 24 mg/l	Fish - <i>Oncorhynchus mykiss</i>	96 hours	OECD 203
	Chronic NOEC 1.7 mg/l	Algae - <i>Pseudokirchneriella subcapitata</i>	96 hours	OECD 201

SECTION 12: Ecological information

Reaction products of alcohols, c14-18, c18 unsat, esterified with phosphorus pentoxide and with amines, c12-14, tert-alkyl	Chronic NOEL 0.12 mg/l	Crustaceans - <i>Daphnia Magna</i>	21 days	OECD 211
	Acute EC50 2.4 mg/l	Algae - <i>Pseudokirchnerella subcapitata</i>	72 hours	OECD 201
C16-18-(even numbered, saturated and unsaturated)-alkylamines	Acute EC50 91 mg/l Chronic NOEL 1 mg/l	Daphnia - <i>Daphnia Magna</i> Algae - <i>Pseudokirchnerella subcapitata</i>	48 hours 21 days	OECD 202 OECD 201
	Acute EL50 0.04 mg/l	Algae - <i>Selenastrum capricornutum</i>	72 hours	-
formaldehyde reaction products with phenol heptyl derivs. and 1,3,4-thiadiazolidine-2,5-dithione	Acute EL50 0.011 mg/l	Daphnia - <i>Daphnia magna</i>	48 hours	-
	Acute EL50 222.5 mg/l	Micro-organism	3 hours	-
	Acute LL50 0.06 mg/l	Fish - <i>Pimephales promelas</i>	96 hours	-
	Chronic NOEL 0.013 mg/l	Daphnia - <i>Daphnia magna</i>	21 days	-
	Acute EC50 25 mg/l	Algae - <i>Pseudokirchnerella subcapitata</i>	72 hours	-
	Acute EC50 75 mg/l Acute LC50 26 mg/l Chronic NOEC 0.12 mg/l	Daphnia - <i>Daphnia magna</i> Fish Daphnia - <i>Daphnia magna</i>	48 hours 96 hours 21 days	- - -

Conclusion/Summary :  Not available.

12.2 Persistence and degradability

Product/substance	Test	Result	Dose	Inoculum
 Distillates (petroleum), hydrotreated heavy paraffinic Reaction products of 4-methyl-2-pentanol and diphosphorus pentasulfide, propoxylated, esterified with diphosphorus pentaoxide, and salted by amines, C12-14-tert-alkyl C16-18-(even numbered, saturated and unsaturated)-alkylamines	OECD 301F	31 % - Not readily - 28 days	-	Activated sludge
	STDMETH, ASTM and USEPA	3 % - Not readily - 28 days	-	Activated sludge
	OECD 301B Ready Biodegradability - CO2 Evolution Test	66 % - Readily - 20 days	-	-

Conclusion/Summary : Not available.

SECTION 12: Ecological information

Product/substance	Aquatic half-life	Photolysis	Biodegradability
Distillates (petroleum), hydrotreated heavy paraffinic	-	-	Not readily
Reaction products of 4-methyl-2-pentanol and diphosphorus pentasulfide, propoxylated, esterified with diphosphorus pentaoxide, and salted by amines, C12-14-tert-alkyl	-	-	Not readily
Reaction products of alcohols, c14-18, c18 unsat, esterified with phosphorus pentoxide and with amines, c12-14, tert-alkyl	-	-	Not readily
C16-18-(even numbered, saturated and unsaturated)-alkylamines	-	-	Readily

12.3 Bioaccumulative potential

Product/substance	LogP _{ow}	BCF	Potential
Distillates (petroleum), hydrotreated heavy paraffinic	>4	-	High
Reaction products of 4-methyl-2-pentanol and diphosphorus pentasulfide, propoxylated, esterified with diphosphorus pentaoxide, and salted by amines, C12-14-tert-alkyl	0.3 to 7.1	-	Low
Reaction products of alcohols, c14-18, c18 unsat, esterified with phosphorus pentoxide and with amines, c12-14, tert-alkyl	5.7	8	Low

12.4 Mobility in soil

Soil/water partition coefficient (K_{oc}) : Not available.

Mobility : Not available.

Mobility in soil : Given its physical and chemical characteristics, the product generally shows low soil mobility. The product is insoluble and floats on water. Loss by evaporation is limited.

12.5 Results of PBT and vPvB assessment

This mixture does not contain any substances that are assessed to be a PBT or a vPvB in a concentration $\geq 0,1\%$.

12.6 Endocrine disrupting properties

SECTION 12: Ecological information

This product contains substance(s), present at a concentration equal to or greater than 0.1% by mass, known to have endocrine disrupting properties included in the list drawn up in accordance in Article 59 of the REACH Regulation or in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605.

12.7 Other adverse effects

No known significant effects or critical hazards.

SECTION 13: Disposal considerations

The information in this section contains generic advice and guidance. The list of Identified Uses in Section 1 should be consulted for any available use-specific information provided in the Exposure Scenario(s).

13.1 Waste treatment methods

Product

Methods of disposal : The generation of waste should be avoided or minimised wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction.

Hazardous waste : Yes.
According to the European Waste Catalogue, Waste Codes are not product specific, but application specific. Waste codes should be assigned by the user based on the application for which the product was used. The following Waste Codes are only suggestions: 13 02 05*

Packaging

Methods of disposal : The generation of waste should be avoided or minimised wherever possible. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible.

Special precautions : This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers.

SECTION 14: Transport information

	ADR/RID	ADN	IMDG	ICAO/IATA
14.1 UN number or ID number	Not regulated.	9006	Not regulated.	Not regulated.
14.2 UN proper shipping name	-	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (C16-18-(even numbered, saturated and unsaturated)-alkylamines)	-	-
14.3 Transport hazard class(es)	-	9	-	-

SECTION 14: Transport information

14.4 Packing group	-	-	-	-
14.5 Environmental hazards	No.	Yes.	No.	No.

Additional information

ADN : The product is only regulated as a dangerous good when transported in tank vessels.

14.6 Special precautions for user : **Transport within user's premises:** always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

14.7 Maritime transport in bulk according to IMO instruments : Not available.

SECTION 15: Regulatory information

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

UK (GB)/REACH

Annex XIV - List of substances subject to authorisation

Annex XIV

None of the components are listed.

Substances of very high concern

None of the components are listed.

Ozone depleting substances

Not listed.

Prior Informed Consent (PIC)

Not listed.

Persistent Organic Pollutants

Not listed.

Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles

Seveso Directive

This product is not controlled under the Seveso Directive.

EU regulations

Take note of Directive 98/24/EC on the protection of the health and safety of workers from the risks related to chemical agents at work.

DIRECTIVE 2008/68/EC related on the inland transport of dangerous goods

Industrial emissions (integrated pollution prevention and control) - Air : Not listed

SECTION 15: Regulatory information

**Industrial emissions
(integrated pollution
prevention and control) -
Water** : Not listed

International regulations

Chemical Weapon Convention List Schedules I, II & III Chemicals

Not listed.

Montreal Protocol

Not listed.

Stockholm Convention on Persistent Organic Pollutants

Not listed.

Rotterdam Convention on Prior Informed Consent (PIC)

Not listed.

UNECE Aarhus Protocol on POPs and Heavy Metals

Not listed.

Inventory list

Australia inventory (AIIC)	: All components are listed or exempted.
Canada inventory	: All components are listed or exempted.
China inventory (IECSC)	: All components are listed or exempted.
Europe inventory	: All components are listed or exempted.
Japan inventory	: Japan inventory (CSCL) : All components are listed or exempted. Japan inventory (ISHL) : All components are listed or exempted.
New Zealand Inventory of Chemicals (NZIoC)	: All components are listed or exempted.
Philippines inventory (PICCS)	: All components are listed or exempted.
Korea inventory (KECI)	: All components are listed or exempted.
Taiwan Chemical Substances Inventory (TCSI)	: All components are listed or exempted.
Thailand inventory	: Not determined.
Turkey inventory	: Not determined.
United States inventory (TSCA 8b)	: All components are listed or exempted.
Vietnam inventory	: Not determined.

The information stated in this section relates solely to the conformity of the chemical product with the countries Inventories. The information used to confirm the inventory status of this product may be based on additional data to the chemical composition shown in Section 3. Other regulations may apply for importation or marketing authorizations.

15.2 Chemical safety assessment : See exposure scenarios

SECTION 16: Other information

Indicates information that has changed from previously issued version.

Abbreviations and acronyms

: ATE = Acute Toxicity Estimate
 CLP = Classification, Labelling and Packaging Regulation [Regulation (EC) No. 1272/2008]
 DNEL = Derived No Effect Level
 DMEL = Derived Minimal Effect Level
 EUH statement = CLP-specific Hazard statement
 N/A = Not available
 PBT = Persistent, Bioaccumulative and Toxic
 vPvB = Very Persistent and Very Bioaccumulative
 PNEC = Predicted No Effect Concentration
 LC50 = Median lethal concentration
 LD50 = Median lethal dose
 OEL = Occupational Exposure Limit
 VOC = Volatile Organic Compound
 UVCB Substance of unknown or Variable composition, Complex reaction products or Biological material
 NOEC No Observed Effect Concentration
 QSAR = Quantitative Structure–Activity Relationship

Procedure used to derive the classification

Classification	Justification
Aquatic Chronic 3, H412	Expert judgment

Full text of abbreviated H statements

H302	Harmful if swallowed.
H304	May be fatal if swallowed and enters airways.
H314	Causes severe skin burns and eye damage.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H318	Causes serious eye damage.
H319	Causes serious eye irritation.
H335	May cause respiratory irritation.
H373	May cause damage to organs through prolonged or repeated exposure.
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.
H411	Toxic to aquatic life with long lasting effects.
H412	Harmful to aquatic life with long lasting effects.

Full text of classifications

Acute Tox. 4	ACUTE TOXICITY - Category 4
Aquatic Acute 1	SHORT-TERM (ACUTE) AQUATIC HAZARD - Category 1
Aquatic Chronic 1	LONG-TERM (CHRONIC) AQUATIC HAZARD - Category 1
Aquatic Chronic 2	LONG-TERM (CHRONIC) AQUATIC HAZARD - Category 2
Aquatic Chronic 3	LONG-TERM (CHRONIC) AQUATIC HAZARD - Category 3
Asp. Tox. 1	ASPIRATION HAZARD - Category 1
Eye Dam. 1	SERIOUS EYE DAMAGE/EYE IRRITATION - Category 1
Eye Irrit. 2	SERIOUS EYE DAMAGE/EYE IRRITATION - Category 2
Skin Corr. 1B	SKIN CORROSION/IRRITATION - Category 1B
Skin Irrit. 2	SKIN CORROSION/IRRITATION - Category 2
Skin Sens. 1B	SKIN SENSITISATION - Category 1B
STOT RE 2	SPECIFIC TARGET ORGAN TOXICITY - REPEATED EXPOSURE - Category 2
STOT SE 3	SPECIFIC TARGET ORGAN TOXICITY - SINGLE EXPOSURE - Category 3

SECTION 16: Other information**Date of printing** : 2024/03/01**Date of issue/ Date of revision** : 2024/03/01**Date of previous issue** : 2022/09/29**Version** : 3**Notice to reader**

To the best of our knowledge, the information contained herein is accurate. However, neither the above-named supplier, nor any of its subsidiaries, assumes any liability whatsoever for the accuracy or completeness of the information contained herein.

Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.

Annex to the extended Safety Data Sheet (eSDS)

Industrial

Identification of the substance or mixture

Product definition : Mixture
Code : 36470
Product name : DYNATRANS DA 80W-90

Section 1 - Title

Short title of the exposure scenario : Formulation additives, lubricants and greases - Industrial
List of use descriptors : **Identified use name:** Formulation additives, lubricants and greases - Industrial
Process Category: PROC01, PROC02, PROC03, PROC04, PROC05, PROC08a, PROC08b, PROC09, PROC15
Sector of end use: SU03, SU10
Subsequent service life relevant for that use: No.
Environmental Release Category: ERC02

Processes and activities covered by the exposure scenario : Industrial formulation of lubricant additives, lubricants and greases. Includes material transfers, mixing, large and small scale packing, sampling, maintenance.

Section 2 - Exposure controls

Contributing scenario controlling environmental exposure for 1:

ATIEL-ATC SPERC 2.Ai-I.v1

Amounts used : Volume manufactured/imported (tonnes/year) : 1.00E+04
Fraction of EU tonnage used in region : 0.1
Fraction of Regional tonnage used locally : 0.1

Frequency and duration of use : Emission days (days per year) : 300

Environment factors not influenced by risk management : Local freshwater dilution factor : 10
Local marine water dilution factor : 100

Other conditions affecting environmental exposure : Negligible wastewater emissions as process operates without water contact.
Release fraction to air from process (after typical onsite RMMs consistent with EU Solvent Emissions Directive requirements) : 5.00E-05
Release fraction to wastewater from process (after typical onsite RMMs and before (municipal) sewage treatment plant): 4.54E-12
Release fraction to soil from process (after typical onsite RMMs): 0

Technical conditions and measures at process level (source) to prevent release : Common practices vary across sites thus conservative process release estimates used.

Technical on-site conditions and measures to reduce or limit discharges, air emissions and releases to soil : Treat air emission to provide a typical removal efficiency of (%) : 70
Prevent discharge of undissolved substance to or recover from onsite wastewater. User sites are assumed to be provided with oil/water separators and for waste water to be discharged via public sewer system.

Organisational measures to prevent/limit release from site : Do not apply industrial sludge to natural soils. Sewage sludge should be incinerated, contained or reclaimed.

Conditions and measures related to sewage treatment plant : Estimated substance removal from wastewater via domestic sewage treatment (%): (%) : 87
Assumed domestic sewage treatment plant flow (m³/d) : 2.00E+03
Maximum allowable site tonnage (M_{safe}) based on release following total wastewater treatment removal (kg/day) : 294 671

Date of issue/Date of revision : 11/22/2021

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Conditions and measures related to external treatment of waste for disposal	: External treatment and disposal of waste should comply with applicable local and/or national regulations.
Conditions and measures related to external recovery of waste	: External recovery and recycling of waste should comply with applicable local and/or national regulations.

Contributing scenario controlling worker exposure for 2:

No exposure assessment presented for human health.

Section 3 - Exposure estimation and reference to its source**Website:** : Not applicable.**Exposure estimation and reference to its source - Environment: 1:****Exposure assessment (environment):** : Used ECETOC TRA model.**Exposure estimation and reference to its source** : Not available.**Exposure estimation and reference to its source - Workers: 2:****Exposure assessment (human):** : The risk Management Measures/Operational Conditions that are identified in the Exposure Scenario are the outcome of a quantitative and qualitative assessment that covers this product.**Exposure estimation and reference to its source** : Not available.**Section 4 - Guidance to DU to evaluate whether he works inside the boundaries set by the ES**

Environment	: Guidance is based on assumed operating conditions which may not be applicable to all sites; thus, scaling may be necessary to define appropriate site-specific risk management measures. Further details on scaling and control technologies are provided in SPERC factsheet. If scaling reveals a condition of unsafe use (i.e., RCRs > 1), additional RMMs or a site-specific chemical safety assessment is required. For further information see www.atiel.org/reach/introduction .
Health	: Where other risk management measures/operational conditions are adopted, then users should ensure that risks are managed to at least equivalent levels. For further information see www.atiel.org/reach/introduction .

Additional good practice advice beyond the REACH CSA**Environment** : Not available.**Health** : Not available.

Annex to the extended Safety Data Sheet (eSDS)

Industrial

Identification of the substance or mixture

Product definition : Mixture
Code : 36470
Product name : DYNATRANS DA 80W-90

Section 1 - Title

Short title of the exposure scenario : General use of lubricants and greases in vehicles or machinery - Industrial

List of use descriptors : **Identified use name:** General use of lubricants and greases in vehicles or machinery - Industrial
Process Category: PROC01, PROC02, PROC08b, PROC09
Sector of end use: SU03
Subsequent service life relevant for that use: No.
Environmental Release Category: ERC04, ERC07

Processes and activities covered by the exposure scenario : Covers general use of lubricants and greases in vehicles or machinery in closed systems. Includes filling and draining of containers and operation of enclosed machinery (including engines) and associated maintenance and storage activities.

Section 2 - Exposure controls

Contributing scenario controlling environmental exposure for 1:

ATIEL-ATC SPERC 4.Bi.v1

Amounts used : Volume manufactured/imported (tonnes/year) : 2.63E+03
Fraction of EU tonnage used in region : 0.1
Fraction of Regional tonnage used locally : 0.1

Frequency and duration of use : Emission days (days per year) : 300

Environment factors not influenced by risk management : Local freshwater dilution factor : 10
Local marine water dilution factor : 100

Other conditions affecting environmental exposure : Negligible wastewater emissions as process operates without water contact.
Release fraction to air from process (after typical onsite RMMs consistent with EU Solvent Emissions Directive requirements) : 5.00E-05
Release fraction to wastewater from process (after typical onsite RMMs and before (municipal) sewage treatment plant): 4.54E-12
Release fraction to soil from process (after typical onsite RMMs): 0

Technical conditions and measures at process level (source) to prevent release : Common practices vary across sites thus conservative process release estimates used.

Technical on-site conditions and measures to reduce or limit discharges, air emissions and releases to soil : Prevent discharge of undissolved substance to or recover from onsite wastewater. User sites are assumed to be provided with oil/water separators and for waste water to be discharged via public sewer system.

Organisational measures to prevent/limit release from site : Do not apply industrial sludge to natural soils. Sewage sludge should be incinerated, contained or reclaimed.

Conditions and measures related to sewage treatment plant : Estimated substance removal from wastewater via domestic sewage treatment (%): (%) : 87
Assumed domestic sewage treatment plant flow (m³/d) : 2.00E+03
Maximum allowable site tonnage (M_{Safe}) based on release following total wastewater treatment removal (kg/day) : 86 395

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Conditions and measures related to external treatment of waste for disposal	: External treatment and disposal of waste should comply with applicable local and/or national regulations.
Conditions and measures related to external recovery of waste	: External recovery and recycling of waste should comply with applicable local and/or national regulations.

Contributing scenario controlling worker exposure for 2:

No exposure assessment presented for human health.

Section 3 - Exposure estimation and reference to its source**Website:** : Not applicable.**Exposure estimation and reference to its source - Environment: 1:****Exposure assessment (environment):** : Used ECETOC TRA model.**Exposure estimation and reference to its source** : Not available.**Exposure estimation and reference to its source - Workers: 2:****Exposure assessment (human):** : The risk Management Measures/Operational Conditions that are identified in the Exposure Scenario are the outcome of a quantitative and qualitative assessment that covers this product.**Exposure estimation and reference to its source** : Not available.**Section 4 - Guidance to DU to evaluate whether he works inside the boundaries set by the ES**

Environment	: Guidance is based on assumed operating conditions which may not be applicable to all sites; thus, scaling may be necessary to define appropriate site-specific risk management measures. Further details on scaling and control technologies are provided in SPERC factsheet. If scaling reveals a condition of unsafe use (i.e., RCRs > 1), additional RMMs or a site-specific chemical safety assessment is required. For further information see www.atiel.org/reach/introduction .
Health	: Where other risk management measures/operational conditions are adopted, then users should ensure that risks are managed to at least equivalent levels. For further information see www.atiel.org/reach/introduction .

Additional good practice advice beyond the REACH CSA**Environment** : Not available.**Health** : Not available.

Annex to the extended Safety Data Sheet (eSDS)

Professional

Identification of the substance or mixture

Product definition : Mixture
Code : 36470
Product name : DYNATRANS DA 80W-90

Section 1 - Title

Short title of the exposure scenario : General use of lubricants and greases in vehicles or machinery - Professional
List of use descriptors : **Identified use name:** General use of lubricants and greases in vehicles or machinery - Professional
Process Category: PROC01, PROC02, PROC08a, PROC08b, PROC20
Sector of end use: SU22
Subsequent service life relevant for that use: No.
Environmental Release Category: ERC09a, ERC09b

Processes and activities covered by the exposure scenario	: Covers general use of lubricants and greases in vehicles or machinery in closed systems. Includes filling and draining of containers and operation of enclosed machinery (including engines) and associated maintenance and storage activities.
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Section 2 - Exposure controls

Contributing scenario controlling environmental exposure for 1:

ATIEL-ATC SPERC 9.Bp.v1

Amounts used	: Volume manufactured/imported (tonnes/year) : 5.39E+03 Fraction of EU tonnage used in region : 0.1 Fraction of Regional tonnage used locally : 0.1
Frequency and duration of use	: Emission days (days per year) : 365
Environment factors not influenced by risk management	: Local freshwater dilution factor : 10 Local marine water dilution factor : 100
Other conditions affecting environmental exposure	: Negligible wastewater emissions as process operates without water contact. Release fraction to air from process (after typical onsite RMMs consistent with EU Solvent Emissions Directive requirements) : 1.00E-04 Release fraction to wastewater from process (after typical onsite RMMs and before (municipal) sewage treatment plant): 5.00E-04 Release fraction to soil from process (after typical onsite RMMs): 1.00E-03
Technical conditions and measures at process level (source) to prevent release	: Common practices vary across sites thus conservative process release estimates used.
Technical on-site conditions and measures to reduce or limit discharges, air emissions and releases to soil	: Prevent discharge of undissolved substance to or recover from onsite wastewater.
Organisational measures to prevent/limit release from site	: Do not apply industrial sludge to natural soils. Sewage sludge should be incinerated, contained or reclaimed.
Conditions and measures related to sewage treatment plant	: Estimated substance removal from wastewater via domestic sewage treatment (%): (%) : 87 Assumed domestic sewage treatment plant flow (m ³ /d) : 2.00E+03 Maximum allowable site tonnage (M _{Safe}) based on release following total wastewater treatment removal (kg/day) : 840

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Conditions and measures related to external treatment of waste for disposal	: External treatment and disposal of waste should comply with applicable local and/or national regulations.
Conditions and measures related to external recovery of waste	: External recovery and recycling of waste should comply with applicable local and/or national regulations.

Contributing scenario controlling worker exposure for 2:

No exposure assessment presented for human health.

Section 3 - Exposure estimation and reference to its source**Website:** : Not applicable.**Exposure estimation and reference to its source - Environment: 1:****Exposure assessment (environment):** : Used ECETOC TRA model.**Exposure estimation and reference to its source** : Not available.**Exposure estimation and reference to its source - Workers: 2:****Exposure assessment (human):** : The risk Management Measures/Operational Conditions that are identified in the Exposure Scenario are the outcome of a quantitative and qualitative assessment that covers this product.**Exposure estimation and reference to its source** : Not available.**Section 4 - Guidance to DU to evaluate whether he works inside the boundaries set by the ES**

Environment	: Guidance is based on assumed operating conditions which may not be applicable to all sites; thus, scaling may be necessary to define appropriate site-specific risk management measures. Further details on scaling and control technologies are provided in SPERC factsheet. If scaling reveals a condition of unsafe use (i.e., RCRs > 1), additional RMMs or a site-specific chemical safety assessment is required. For further information see www.atiel.org/reach/introduction .
Health	: Where other risk management measures/operational conditions are adopted, then users should ensure that risks are managed to at least equivalent levels. For further information see www.atiel.org/reach/introduction .

Additional good practice advice beyond the REACH CSA**Environment** : Not available.**Health** : Not available.