

DRAWN UP BY	VERSION N.	DATE	SUPERSEDES SDS DATED
A.F.	2	15/10/15	22/09/14

## 1. Identification of the substance/preparation and of the company

<b>Identification of the substance or preparation:</b>	<b>SP032 PAO</b>
<b>Type of product and use:</b>	Oil for vacuum pumps.
<b>Company identification:</b>	<b>D.V.P. Vacuum Technology S.p.a.</b> Via Rubizzano, 627 40018 San Pietro in Casale (BO) ITALY Tel.: +39.051.188.971.11 Fax: +39.051.188.971.70 <a href="http://www.dvp.it">www.dvp.it</a> e-mail: <a href="mailto:info@dvp.it">info@dvp.it</a>
<b>Telephone Nr.:</b>	+39.051.188.971.11

## 2. Composition/information on ingredients

<b>Substances</b>	Not applicable.
<b>Mixture</b>	
<b>Composition/information on ingredients:</b>	Synthetic base oil Additives.
<b>Hazardous ingredients and/or with relevant occupational exposure limits:</b>	See table.

Name	Product identifier	%	Classification according to Directive 67/548/EEC
Benzene, mono-C15-36-brached alkyl derivs., C24-rich (Component)	(CAS No.) 90171-05-4 (EC no) 290-544-7 (EC index no) N/A (REACH-no) N/D	4,99-9,99	R53
Reaction mass of isomers of: C7-9-alkyl 3-(3,5-di-trans-butyl-4-hydroxyphenyl)propionate (Additive)	(CAS No.) 125643-61-0 (EC no) 406-040-9 (EC index no) 607-530-00-7 (REACH-no) N/D	0,99-1,49	R53
O,O,O-tris(2(or 4)-C9-10-isoalkylphenyl) phosphorothioate (126019-82-7)	(CAS No.) 126019-82-7 (EC no) 406-940-1 (EC index no) N/A (REACH-no) N/D	0,99-1,49	N; R51/53
Benzenamine, N-phenyl-, reaction products with styrene and 2,4,4-trimethylpentene (Additive)	(CAS No.) 68921-45-9 (EC no) 272-940-1 (EC index no) N/D (REACH-no) N/D	0,3-0,49	R52/53
Amines, C11-14-branched alkyl, monohexyl and dihexyl phosphates (Additive)	(CAS No.) 80939-62-4 (EC no) 279-632-6 (EC index no) N/A (REACH-no) N/D	0,149-0,19	Xi, R36/38 N; R51/53
Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
Benzene, mono-C15-36-brached alkyl derivs., C24-rich (Component)	(CAS No.) 90171-05-4 (EC no) 290-544-7 (EC index no) N/A (REACH-no) N/D	4,99-9,99	Aquatic Chronic 4, H413
Reaction mass of isomers of: C7-9-alkyl 3-(3,5-di-trans-butyl-4-hydroxyphenyl)propionate (Additive)	(CAS No.) 125643-61-0 (EC no) 406-040-9 (EC index no) 607-530-00-7 (REACH-no) N/D	0,99-1,49	Aquatic Chronic 4, H413
O,O,O-tris(2(or 4)-C9-10-	(CAS No.) 126019-82-7	0,99-1,49	Aquatic Chronic 2, H411

Subject to change without prior notice

DRAWN UP BY	VERSION N.	DATE	SUPERSEDES SDS DATED
A.F.	2	15/10/15	22/09/14

isoalkylphenyl) phosphorothioate (126019-82-7)	(EC no) 406-940-1 (EC index no) N/A (REACH-no) N/D		
Benzenamine, N-phenyl-, reaction products with styrene and 2,4,4-trimethylpentene (Additive)	(CAS No.) 68921-45-9 (EC no) 272-940-1 (EC index no) N/D (REACH-no) N/D	0,3-0,49	Aquatic Chronic 3, H412
Amines, C11-14-branched alkyl, monohexyl and dihexyl phosphates (Additive)	(CAS No.) 80939-62-4 (EC no) 279-632-6 (EC index no) N/A (REACH-no) N/D	0,149-0,19	Skin Irrit. 2, H315 Eye Irrit. 2, H319 Aquatic Chronic 2, H411

### 3. Hazards identification

<b>Classification of the substance or mixture</b>	
<b>Classification according to Regulation (EC) No. 1272/2008 [CLP]</b>	Not classified.
<b>Classification according to Directive 67/548/EEC or 1999/45/EC</b>	Not classified.
<b>Adverse physicochemical, human health and environmental effects</b>	None to be reported, according to the present EU regulations.
<b>Label elements</b>	
<b>Labelling according to Regulation (EC) No. 1272/2008 [CLP]</b>	
<b>EUH phrases:</b>	EUH210 - Safety data sheet available on request
<b>Other hazards (not relevant for classification)</b>	
<b>Physical/chemical:</b>	This product is combustible, but not classified as Flammable. The creation of flammable vapour mixtures takes place at temperatures which are higher than normal ambient levels.
<b>Health:</b>	If the product is handled or used at high temperature, contact with hot product or vapours may cause burns. Any material in case of accidents involving pressurized circuits and the like, may be accidentally injected under the skin, even without external damage. In such a case, the victim should be brought to a hospital as soon as possible, to get specialized medical treatment.
<b>Environment:</b>	None.
<b>Contaminants:</b>	None.
	<b>This substance/mixture does not meet the PBT criteria of REACH, annex XIII.</b> <b>This substance/mixture does not meet the vPvB criteria of REACH, annex XIII.</b>

### 4. First aid measures

<b>Description of first aid measures</b>	
<b>First-aid measures general:</b>	In case of spontaneous vomiting, transport the victim to a hospital, to verify the possibility that the product has been aspirated into the lungs.
<b>First-aid measures after inhalation:</b>	In case of disturbances owing to inhalation of vapours or mists, remove the victim from exposure; keep at rest; if necessary, seek medical attention.
<b>First-aid measures after skin contact:</b>	Take off contaminated clothing and shoes. Wash thoroughly with soap and water. If inflammation or irritation persists, seek medical advice. In case of contact with hot product, cool affected part with plenty of cold water, and cover with gauze or clean cloth. Call a

Subject to change without prior notice

DRAWN UP BY	VERSION N.	DATE	SUPERSEDES SDS DATED
A.F.	2	15/10/15	22/09/14

	doctor or bring to an hospital. Do not use salves or ointments, unless directed by doctor. Do not put ice on the burn.
<b>First-aid measures after eye contact:</b>	Rinse eyes thoroughly for at least 15 minutes. Keep eyelids well apart. If irritation persists, seek medical advice. In case of contact with hot product, cool affected part with plenty of cold water, and cover with gauze or clean cloth. Call a doctor or bring to an hospital. Do not use salves or ointments, unless directed by doctor.
<b>First-aid measures after ingestion:</b>	Do not induce vomiting to avoid aspiration into the lungs. If the person is conscious, rinse mouth with water without swallowing. Keep at rest. Call for medical assistance or bring to an hospital. If the casualty is unconscious, place in the recovery position. In case of spontaneous vomiting, keep head low, to avoid the risk of aspiration into the lungs.
<b>Most important symptoms and effects, both acute and delayed</b>	
<b>Symptoms/injuries after inhalation:</b>	This product has a low vapour pressure, and in normal conditions at ambient temperature the concentration in the air is negligible. A significant concentration may build up only if the product is used at high temperature, or in case of sprays and mists. In these cases overexposure to vapours may cause irritation to airways, nausea and dizziness.
<b>Symptoms/injuries after skin contact:</b>	Prolonged and repeated skin contact may cause reddening, irritation and dermatitis, due to a defatting effect. Contact with hot product may cause thermal burns.
<b>Symptoms/injuries after eye contact:</b>	Contact with eyes may cause a light transient irritation. Contact with hot product or vapours may cause burns.
<b>Symptoms/injuries after ingestion:</b>	Accidental ingestion of small quantities of the product may cause irritation, nausea and gastric disturbances. Taking into account the taste of the product, however, ingestion of dangerous quantities is very unlikely.
<b>Symptoms/injuries upon intravenous administration:</b>	No information available.
<b>Indication of any immediate medical attention and special treatment needed</b>	If necessary, drain stomach by gastric lavage ONLY under qualified medical supervision.

<b>5. Firefighting measures</b>	
<b>Extinguishing media</b>	
<b>Suitable extinguishing media:</b>	Small-size fires: carbon dioxide, dry chemicals, foam, sand or earth. Large fires: foam or water fog (mist). These means should be used by trained personnel only.
<b>Unsuitable extinguishing media:</b>	Do not use water jets. They could cause splattering, and spread the fire.
<b>Special hazards arising from the substance or mixture</b>	
<b>Fire hazard:</b>	This product is combustible, but not classified as Flammable. The creation of flammable vapour mixtures takes place at temperatures which are higher than normal ambient levels.
<b>Explosion hazard:</b>	In case of losses from pressurized circuits, the sprays may form mists. Take into account that in this case the lower explosion limit for mists is about 45 g/m <sup>3</sup> of air.

DRAWED UP BY	VERSION N.	DATE	SUPERSEDES SDS DATED
A.F.	2	15/10/15	22/09/14

<b>Combustion products:</b>	Incomplete combustion is likely to give rise to a complex mixture of airborne solid and liquid particulates, gases, including carbon monoxide, NOx., POx., Oxygenated compounds (aldehydes, etc.).
<b>Advice for firefighters</b>	
<b>Firefighting instructions:</b>	Shut off source of product, if possible. If possible, move containers and drums away from danger area. Spilled product which is not burning should be covered with sand or foam. Use water sprays to cool containers and surfaces exposed to the flames. If the fire cannot be controlled, evacuate area.
<b>Special protective equipment for firefighters:</b>	Personal protection equipment for firefighters (see also sect. 8). Self-contained breathing apparatus.
<b>Other information:</b>	In case of fire, do not discharge residual product, waste materials and runoff water: collect separately and use a proper treatment.

## 6. Accidental release measures

<b>Personal precautions, protective equipment and emergency procedures</b>	
<b>General measures:</b>	Stop or contain leak at the source, if safe to do so. Eliminate all ignition sources if safe to do so (e.g. electricity, sparks, fires, flares). Avoid accidental sprays on hot surfaces or electrical contacts. Avoid direct contact with released material. Keep upwind.
<b>For non-emergency personnel</b>	
<b>Protective equipment:</b>	See Section 8.
<b>Emergency procedures:</b>	Keep non-involved personnel away from the area of spillage. Alert emergency personnel. Except in case of small spillages, the feasibility of any actions should always be assessed and advised, if possible, by a trained, competent person in charge of managing the emergency.
<b>For emergency responders</b>	
<b>Protective equipment:</b>	Small spillages: normal antistatic working clothes are usually adequate. Large spillages: full body suit of chemically resistant and antistatic material. If necessary heat resistant and insulated. Work gloves providing adequate chemical resistance, specifically to aromatic hydrocarbons. Gloves made of PVA are not water-resistant, and are not suitable for emergency use. If contact with hot product is possible or anticipated, gloves should be heat-resistant and thermally insulated. Work helmet. Antistatic non-skid safety shoes or boots. Goggles and /or face shield, if splashes or contact with eyes is possible or anticipated. Respiratory protection: A half or full-face respirator with filter(s) for organic vapours (and when applicable for H <sub>2</sub> S). A Self Contained Breathing Apparatus (SCBA) can be used according to the extent of spill and predictable amount of exposure. If the situation cannot be completely assessed, or if an oxygen deficiency is possible, only SCBA's should be used.
<b>Emergency procedures:</b>	Notify local authorities according to relevant regulations.
<b>Environmental precautions</b>	Do not let the product flow into sewers, water courses or underground spaces. In case of soil contamination, remove contaminated soil and treat in accordance with

Subject to change without prior notice

DRAWED UP BY	VERSION N.	DATE	SUPERSEDES SDS DATED
A.F.	2	15/10/15	22/09/14

	local regulations.
<b>Methods and material for containment and cleaning up</b>	
<b>For containment:</b>	Soil. Contain spilled liquid with sand, earth or other suitable absorbents (non-flammable). Recover free liquid and waste materials in suitable waterproof and oil-resistant containers. Clean contaminated area. Dispose of according to local regulations. Water: Confine the spillage. Remove from surface by skimming or suitable floating absorbents. Collect recovered product and other waste materials in suitable waterproof, oil resistant containers. Recover or dispose of according to local regulations. Do not use solvents or dispersants, unless specifically advised by an expert, and, if required, approved by local authorities.
<b>Other information:</b>	Recommended measures are based on the most likely spillage scenarios for this material; however, local conditions (wind, air temperature, wave/current direction and speed) may significantly influence the choice of appropriate actions.

<b>7. Handling and storage</b>	
<b>Precautions for safe handling</b>	
<b>Precautions for safe handling:</b>	Ensure that all relevant regulations regarding handling and storage facilities of flammable products are followed. Do not use compressed air for filling, discharging, or handling operations. Keep away from heat/sparks/open flames/hot surfaces. Use and store only outdoors or in a well-ventilated area. During transfer and mixing operations, ensure that all equipment is correctly grounded. Avoid the build-up of electric charges. Emptied containers can contain combustible product residues. Do not cut, weld, drill, burn or incinerate empty containers or drums, unless they have been drained and cleaned. Before entering storage tanks and commencing any operation in a confined area (e.g. tunnels), carry out an adequate clean-up, and check the atmosphere for oxygen content and flammability.
<b>Handling temperature:</b>	0 - 55 °C
<b>Hygiene measures:</b>	Avoid contact with skin. Do not breathe fume/ mist/ vapours. Do not ingest. Do not smoke. Do not eat and do not drink during use. Do not clean hands with dirty or oil-soaked rags. Do not re-use clothes, if they are still contaminated. Keep away from food and beverages.
<b>Conditions for safe storage, including any incompatibilities</b>	
<b>Storage conditions:</b>	Store in dry, well-ventilated area. Keep away from open flames, hot surfaces and sources of ignition. Do not smoke.
<b>Incompatible products:</b>	Keep away from: strong oxidants.
<b>Storage temperature:</b>	0 - 55 °C
<b>Storage area:</b>	Storage area layout, tank design, equipment and operating procedures must comply with the relevant European, national or local legislation. Storage installations should be designed with adequate bunds so as to prevent ground and water pollution in case of

Subject to change without prior notice

DRAWN UP BY	VERSION N.	DATE	SUPERSEDES SDS DATED
A.F.	2	15/10/15	22/09/14

	leaks or spills. Cleaning, inspection and maintenance of internal structure of storage tanks must be done only by properly equipped and qualified personnel as defined by national, local or company regulations.
<b>Packages and containers:</b>	If the product is supplied in containers: Keep containers tightly closed and properly labelled. Keep only in the original container or in a suitable container for this kind of product.
<b>Packaging materials:</b>	For containers or container linings use materials specifically approved for use with this product. Recommended materials for containers or container linings use mild steel, stainless steel. Some synthetic materials may be unsuitable for containers or container linings depending on the material specification and intended use. Compatibility should be checked with the manufacturer.
<b>Specific end use(s)</b>	No information available.

## 8. Exposure controls/personal protection

<b>Control parameters</b>	
<b>Monitoring methods:</b>	Monitoring procedures should be chosen according to the indications set by national authorities or labour contracts. Refer to relevant legislation and in any case to the good practice of industrial hygiene.
<b>Additional information:</b>	Note: The Derived No Effect Level (DNEL) is an estimated safe level of exposure that is derived from toxicity data in accord with specific guidance within the European REACH regulation. The DNEL may differ from an Occupational Exposure Limit (OEL) for the same chemical. OELs may be recommended by an individual company, a governmental regulatory body or an expert organization, such as the Scientific Committee for Occupational Exposure Limits (SCOEL) or the American Conference of Governmental Industrial Hygienists (ACGIH). OELs are considered to be safe exposure levels for a typical worker in an occupational setting for an 8-hour work shift, 40 hour work week, as a time weighted average (TWA) or a 15 minute short-term exposure limit (STEL). While also considered to be protective of health, OELs are derived by a process different from that of REACH.
<b>Exposure controls</b>	
<b>Appropriate engineering controls:</b>	Before entering storage tanks and commencing any operation in a confined area (e.g. tunnels), carry out an adequate clean-up, and check the atmosphere for oxygen content and flammability.
<b>Personal protective equipment (for industrial or professional use):</b>	Face shield. Gloves. Protective clothing. Safety glasses. Safety shoes or boots. Dust/aerosol mask.
<b>Hand protection:</b>	When there is a risk of contact with the skin, use hydrocarbon-resistant, felt-lined gloves. Use gloves respecting all the conditions and within the limits set by the manufacturer. Replace gloves immediately in case of cuts, holes or other signs of damages or degradation. If necessary, refer to the EN 374 standard. Materials that are presumably adequate: nitrile (NBR) or PVC with a protection index > 5 (permeation time > 240 mins).

Subject to change without prior notice

DRAWED UP BY	VERSION N.	DATE	SUPERSEDES SDS DATED
A.F.	2	15/10/15	22/09/14

<b>Eye protection:</b>	When there is a risk of contact with the eyes, use safety goggles or other means of protection (face shield). If necessary, refer to national standards or to the EN 166 standard.
<b>Skin and body protection:</b>	Long-sleeved overalls. If necessary, refer to the EN 340 and related standards, for definition of characteristics and performance according to the risk rating of the area. Antistatic non-skid safety shoes or boots, chemical resistant, if necessary heat resistant and insulated.
<b>Respiratory protection:</b>	Independently from other possible actions (technical modifications, operating procedures, and other means to limit the exposure of workers), personal protection equipment can be used according to necessity. Open or well ventilated spaces: in presence of oil mists and if the product is handled without adequate containment means: use full or half-face masks with filter for mists/aerosols. In case there is a significant presence of vapours (e.g. through handling at high temperature), use full or half-face masks with filter for hydrocarbon vapours. Closed or confined areas (e.g. tank interiors): the use of protection measures for airways (masks or self-contained breathing apparatus), must be assessed according to the specific activity, as well as level and duration of predicted exposure.
<b>Thermal hazard protection:</b>	If contact with hot product is possible or anticipated, gloves should be heat-resistant and thermally insulated.
<b>Environmental exposure controls:</b>	Do not discharge the product into the environment. Do not apply industrial sludge to natural soils. Sludge should be incinerated, contained or reclaimed. Prevent discharge of undissolved substance to or recover from onsite wastewater.
<b>Consumer exposure controls:</b>	No special requirements necessary, if handled at room temperature.
<b>Hygiene measures</b>	
<b>General protective and hygienic measures</b>	Avoid contact with skin and eyes. Do not breathe vapours or mists. Do not clean hands with dirty or oil-soaked rags. Do not keep dirty rags in the overall pockets. Do not drink, eat or smoke with dirty hands. Wash hands with water and mild soap, do not use solvents or other irritant products which have a defatting effect on the skin. Do not re-use clothes, if they are still contaminated.

## 9. Physical and chemical properties

<b>Information on basic physical and chemical properties</b>	
<b>Physical state:</b>	Liquid.
<b>Appearance:</b>	Liquid, bright & clear.
<b>Molecular mass:</b>	Not applicable for mixtures
<b>Colour:</b>	Pale yellow.
<b>Odour:</b>	Slight odour of petroleum.
<b>Odour threshold:</b>	There are no data available on the preparation/mixture itself.
<b>pH:</b>	Not applicable
<b>Relative evaporation rate (butylacetate=1):</b>	Negligible.
<b>Melting point:</b>	Pour point $\leq$ -51 °C (ASTM D 97)

Subject to change without prior notice

DRAWED UP BY	VERSION N.	DATE	SUPERSEDES SDS DATED
A.F.	2	15/10/15	22/09/14

<b>Freezing point</b>	No data available.
<b>Boiling point:</b>	≥ 200 °C (ASTM D 1160)
<b>Flash point:</b>	≥ 195 °C (ASTM D 93)
<b>Self ignition temperature:</b>	≥ 300 °C (DIN 51794)
<b>Decomposition temperature:</b>	No data available
<b>Flammability (solid, gas):</b>	No data available
<b>Vapour pressure:</b>	≤ 0,13 kPa (20 °C)
<b>Relative vapour density at 20 °C:</b>	No data available
<b>Relative density:</b>	No data available
<b>Density:</b>	≤ 850 kg/m <sup>3</sup> (15 °C) (ASTM D 4052)
<b>Solubility:</b>	Water: immiscible and insoluble
<b>Log Pow:</b>	Not applicable for mixtures.
<b>Log Kow:</b>	No data available
<b>Viscosity, kinematic:</b>	29 - 34 mm <sup>2</sup> /s (40 °C) (ASTM D 445)
<b>Viscosity, dynamic:</b>	No data available
<b>Explosive properties:</b>	None.
<b>Oxidising properties:</b>	None.
<b>Explosive limits:</b>	LEL ≥ 45 g/m <sup>3</sup> (Nebbie d'olio minerale)
<b>Other information</b>	
<b>VOC content:</b>	= 0 % (EU, CH)

## 10. Stability e reactivity

<b>Reactivity</b>	This mixture does not offer any further hazard for reactivity, except what is reported in the following paragraphs.
<b>Chemical stability</b>	Stable product, according to its intrinsic properties (in normal conditions of storage and handling).
<b>Possibility of hazardous reactions</b>	None (in normal conditions of storage and handling). Contact with strong oxidizers (peroxides, chromates, etc.) may cause a fire hazard. A mixture with nitrates or other strong oxidisers (e.g. chlorates, perchlorates, liquid oxygen) may create an explosive mass. Sensitivity to heat, friction or shock cannot be assessed in advance.
<b>Conditions to avoid</b>	Keep away from: strong oxidants. Keep away from open flames, hot surfaces and sources of ignition. Avoid the build-up of electrostatic charge.
<b>Incompatible materials</b>	Strong oxidants.
<b>Hazardous decomposition products</b>	None.

## 11. Toxicological information

<b>Information on toxicological effects</b>			
<b>Acute toxicity:</b>	Not classified (Based on available data, the classification criteria are not met) (according to composition).		
<b>PAO SP032</b>	<b>LD50 oral rat</b>	<b>LD50 dermal rat</b>	<b>LC50 inhalation rat (mg/l)</b>
	> 2000 mg/kg bodyweight (Calculated data).	> 2000 mg/kg bodyweight (Calculated data).	> 5 mg/l/4h (Calculated data).
<b>Amines, C11-14-branched alkyl, monohexyl and dihexyl phosphates (80939-62-4)</b>	<b>LD50 oral rat</b>		<b>LD50 dermal rat</b>
	≥ 2000 mg/kg bodyweight (OECD 401)		≥ 5000 (OECD 402)

Subject to change without prior notice



DRAWN UP BY	VERSION N.	DATE	SUPERSEDES SDS DATED
A.F.	2	15/10/15	22/09/14

<b>Benzene, mono-C15-36-branched alkyl derivs., C24-rich (90171-05-4)</b>	<b>LD50 oral rat</b> ≥ 5000 mg/kg bodyweight	<b>LD50 dermal rabbit</b> ≥ 2000 mg/kg bodyweight
<b>O,O,O-tris(2(or 4)-C9-10-isoalkylphenyl) phosphorothioate (126019-82-7)</b>	<b>LD50 oral rat</b> > 2000 mg/kg (OECD 401)	<b>LD50 dermal rat</b> > 2000 mg/kg (OECD 402)
<b>Skin corrosion/irritation:</b>	Not classified (Based on available data, the classification criteria are not met). (according to composition) Prolonged and repeated skin contact may cause reddening, irritation and dermatitis, due to a defatting effect. pH: Not applicable.	
<b>Serious eye damage/irritation:</b>	Not classified (Based on available data, the classification criteria are not met). (according to composition). pH: Not applicable.	
<b>Respiratory or skin sensitisation:</b>	Not classified (Based on available data, the classification criteria are not met). (according to composition) This product does not contain any significant amounts of substances classified as sensitizers (in any case < 0.1 % wt).	
<b>Germ cell mutagenicity:</b>	Not classified (Based on available data, the classification criteria are not met). (according to composition) This product does not contain any significant amounts of substances classified as mutagenic by the EU (in any case < 0.1 % wt).	
<b>Carcinogenicity:</b>	Not classified (Based on available data, the classification criteria are not met). (according to composition) None of the components of this product are listed as carcinogen by NTP, IARC, OSHA, EU or others.	
<b>Reproductive toxicity:</b>	Not classified (Based on available data, the classification criteria are not met). (according to composition) This product does not contain any significant amounts of substances classified as Toxic for Reproduction by the EU (in any case < 0.1 % wt).	
<b>Specific target organ toxicity (single exposure):</b>	Not classified (Based on available data, the classification criteria are not met). (according to composition).	
<b>O,O,O-tris(2(or 4)-C9-10-isoalkylphenyl) phosphorothioate (126019-82-7)</b>	<b>NOAEL (oral, rat)</b> = 1000 mg/kg bodyweight	
<b>Specific target organ toxicity (repeated exposure)</b>	Not classified (Based on available data, the classification criteria are not met). (according to composition).	
<b>O,O,O-tris(2(or 4)-C9-10-isoalkylphenyl) phosphorothioate (126019-82-7)</b>	<b>NOAEL (oral, rat, 90 days)</b> = 1000 mg/kg bodyweight/day	
<b>Aspiration hazard:</b>	Not classified (Based on available data, the classification criteria are not met) Viscosity, kinematic: > 20,5 mm <sup>2</sup> /s (40 °C) (ASTM D 445)	
<b>Potential Adverse human health effects and symptoms:</b>	Prolonged and repeated skin contact may cause reddening, irritation and dermatitis, due to a defatting effect. Contact with eyes may cause temporary reddening and irritation.	
<b>Other information:</b>	None.	

Subject to change without prior notice

DRAWN UP BY	VERSION N.	DATE	SUPERSEDES SDS DATED
A.F.	2	15/10/15	22/09/14

12. Ecological information			
<b>Toxicity</b>			
<b>Ecology - general:</b>	According to the components, and by comparison with other products of the same type and composition, it is expected that this product has a toxicity for aquatic organisms > 100 mg/l, and must not be regarded as dangerous to the environment. An uncontrolled release to the environment may nevertheless produce a contamination of environmental compartments (air). Handle according to general working hygiene practices to avoid pollution and release into the environment.		
<b>Ecology - air:</b>	This product has a low vapour pressure. A significant exposure may happen only if the product is used at high temperature, or in case of sprays and mists.		
<b>Ecology - water:</b>	This product is not soluble in water. It floats on water and forms a film on the surface. The damage to aquatic organisms is of mechanical kind (immobilization and entrapment)		
<b>PAO SP032</b>	<b>LC50 fishes 1</b>	<b>LC50 other aquatic organisms 1</b>	<b>EC50 Daphnia 1</b>
	≥ 100 mg/l (Calculated data).	≥ 100 mg/l (Calculated data).	≥ 100 mg/l (Calculated data).
<b>Reaction mass of isomers of: C7-9-alkyl 3-(3,5-di-trans-butyl-4-hydroxyphenyl)propionate (125643-61-0)</b>	<b>LC50 fishes 1</b>	<b>EC50 Daphnia 1</b>	<b>ErC50 (algae)</b>
	> 74 mg/l (OECD 203, 96h, Brachydanio rerio)	> 100 mg/l (OECD 202, 24h)	≥ 3 mg/l (OECD 201, 72 h, Scenedesmus subspicatus)
<b>Amines, C11-14-branched alkyl, monohexyl and dihexyl phosphates (80939-62-4)</b>	<b>LC50 fishes 1</b>	<b>EC50 Daphnia 1</b>	<b>ErC50 (algae)</b>
	5,5 mg/l (OECD 203, 96h, Oncorhynchus mykiss)	1,2 mg/l (OECD 202, 48h)	≥ 10 mg/l (OECD 201/EC C.3; 72h, Selenastrum capricornutum)
<b>Benzenamine, N-phenyl-, reaction products with styrene and 2,4,4-trimethylpentene (68921-45-9)</b>	<b>LC50 fishes 1</b>		<b>ErC50 (algae)</b>
	= 920 mg/l (96 h; read-across)		= 600 mg/l (OECD 201; 96 h; Scenedesmus capricornutum; read-across)
<b>O,O,O-tris(2(or 4)-C9-10-isoalkylphenyl) phosphorothioate (126019-82-7)</b>	<b>LC50 fishes 1</b>	<b>EC50 Daphnia 1</b>	<b>ErC50 (algae)</b>
	≥ 25 mg/l (OECD 203; 96h; Brachydanio rerio)	5,5 mg/l (OECD 202; 24h)	≥ 100 mg/l (OECD 201; ErC50 72h)
<b>Persistence and degradability</b>			
<b>PAO SP032</b>	<b>Persistence e degradability</b>		
	The most significant constituents of the product should be considered as "inherently biodegradable", but not "readily biodegradable", and they may be moderately persistent, particularly in anaerobic conditions.		
<b>Amines, C11-14-branched alkyl, monohexyl and dihexyl phosphates (80939-62-4)</b>	<b>BOD (% of ThOD)</b>		
	13 % ThOD		
<b>Benzenamine, N-phenyl-, reaction products with styrene and 2,4,4-trimethylpentene (68921-45-9)</b>	<b>Biodegradation</b>		
	= 8 % (OECD 301; Read-across)		
<b>O,O,O-tris(2(or 4)-C9-10-isoalkylphenyl) phosphorothioate (126019-82-7)</b>	<b>Persistence e degradability</b>		<b>Biodegradation</b>
	Not biodegradable.		2 - 4 % (OECD 301B; 28d)

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DRAWED UP BY	VERSION N.	DATE	SUPERSEDES SDS DATED
A.F.	2	15/10/15	22/09/14

<b>Bioaccumulative potential</b>			
PAO SP032	<b>Log Pow</b>		
	Not applicable for mixtures		
<b>Mobility in soil</b>		No additional information available	
<b>Results of PBT and vPvB assessment</b>			
PAO SP032	This substance/mixture does not meet the PBT criteria of REACH, annex XIII.	This substance/mixture does not meet the vPvB criteria of REACH, annex XIII.	<b>Results of PBT-vPvB assessment</b> The components in this formulation do not meet the criteria for classification as PBT or vPvB. The product should be considered as "Not persistent" in the environment, according to the REACH Annex XIII criteria (point 1.1)
	<b>Benzene, mono-C15-36-branched alkyl derivs., C24-rich (90171-05-4)</b>	This substance/mixture does not meet the PBT criteria of REACH, annex XIII.	
<b>Other adverse effects</b>			
<b>Other adverse effects:</b>		None.	
<b>Other information:</b>		This product has no specific properties for inhibition of bacterial activity. In any case, wastewater containing this product should be treated in plants that are suited for the specific purpose.	

Subject to change without prior notice

<b>13. Disposal considerations</b>	
<b>Waste treatment methods</b>	
<b>Waste treatment methods:</b>	Do not dispose of the product, either new or used, by discharging into sewers, tunnels, lakes or water courses. Deliver to a qualified official collector.
<b>Sewage disposal recommendations:</b>	Do not apply industrial sludge to natural soils. Sludge should be incinerated, contained or reclaimed.
<b>Waste disposal recommendations</b>	European Waste Catalogue code(s) (Decision 2001/118/CE): 13 02 06* (synthetic engine, gear and lubricating oils). This EWC code is only a general indication, and takes into account the original composition of the product and its intended use. The user has the responsibility of choosing the right EWC code, considering the actual use of the product, alterations and contaminations.
<b>Additional information:</b>	Empty containers may contain combustible product residues. Do not cut, weld, drill, burn or incinerate empty containers or drums, unless they have been cleaned, and declared safe. Dispose of empty, not cleaned containers safely, according to local regulations.
<b>Ecology - waste materials:</b>	The product as it is does not contain halogenated substances.

## 14. Transport information

DRAWN UP BY	VERSION N.	DATE	SUPERSEDES SDS DATED
A.F.	2	15/10/15	22/09/14

In accordance with ADR / RID / ADNR / IMDG / ICAO / IATA	
UN number	No dangerous good in sense of transport regulations.
UN proper shipping name	
Proper Shipping Name:	Not applicable
Transport hazard class(es)	
Subsidiary risks (IMDG):	-
Subsidiary risks (ICAO):	-
Packing group	
Packing group (UN):	-
Environmental hazards	
Other information:	None.
Special precautions for user	
Special transport precautions:	None.
Overland transport	
State during transport (ADR-RID):	Liquid.
Classification code:	-
Limited quantities (ADR):	Not applicable
Transport by sea	
Port Regulation Law:	Not applicable
Limited quantities (IMDG):	Not applicable
EmS-No. (1):	-
MFAG-No.:	-
Air transport	
Instruction "cargo" (ICAO):	Not applicable
Instruction "passenger" (ICAO):	Not applicable
Instruction "passenger" - Limited quantities (ICAO):	Not applicable
Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code	
IBC code:	None.

15. Regulatory information	
Safety, health and environmental regulations/legislation specific for the substance or mixture	
EU-Regulations	No REACH Annex XVII restrictions
	No ingredients are included in the REACH Candidate list
Relevant EU Legislation:	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). (et sequens). 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 (et sequens). Directives 89/391/CEE, 89/654/CEE, 89/655/CEE, 89/656/CEE, 90/269/CEE, 90/270/CEE, 90/394/CEE, 90/679/CEE, 93/88/CEE, 95/63/CE, 97/42/CE, 98/24/CE, 99/38/CE, 99/92/CE, 2001/45/CE, 2003/10/CE, 2003/18/CE (Health and safety on the workplace) Directive 98/24/EC (protection of the health and safety of workers from the risks related to chemical agents at work). Directive 92/85/CE (measures to encourage improvements in the safety and health at work of pregnant workers and

Subject to change without prior notice

DRAWED UP BY	VERSION N.	DATE	SUPERSEDES SDS DATED
A.F.	2	15/10/15	22/09/14

	workers who have recently given birth or are breastfeeding) Directives 96/82/CE and 2003/105/CE (Control of major-accident hazards involving dangerous substances) Directive 2004/42/CE (Limitation of emissions of Volatile Organic Compounds) Labelling according to directives 67/548/EEC and 1999/45/EC.
<b>VOC content:</b>	= 0 % (EU, CH)
<b>EURAL code (EWC):</b>	13 02 06*
<b>National regulations</b>	
<b>Maladies professionnelles (F):</b>	RG 36 - Affections provoquées par les huiles et graisses d'origine minérale ou de synthèse
<b>Water hazard class (WGK) (D):</b>	1 (according to composition)
<b>WGKremark:</b>	Classification based on the components in compliance with Verwaltungsvorschrift wassergefährdender Stoffe (VwVwS)
<b>Storage class (LGK) (D):</b>	LGK 12 - Non-flammable liquids in non-flammable packages
<b>VbF class (D):</b>	Not applicable.
<b>Regional legislation:</b>	National adoption of EU Directives concerning health and safety on the workplace. National laws on classification and labeling of dangerous substances/preparations (Adoption of Directive 67/548/CE and subsequent Adaptations to Technical Progress - ATP, and Directive 1999/45/CE). National adoption of EU Directives concerning control of major-accident hazards involving dangerous substances (96/82/CE - 2003/105/CE). Relevant national laws on prevention of water pollution. Relevant national laws on protection of the health of pregnant workers (National adoption of Dir. 92/85/EEC). National adoption of Directive 75/439/CEE concerning disposal of used oils.
<b>Chemical safety assessment:</b>	Not applicable.

## 16. Other information

<b>Document references</b>	Modification according to Regulation (EC) nr. 1907/2006 and nr. 453/2010. S.F. 01/03/2013
<b>Training advice:</b>	Provide adequate training to professional operators for the use of PPEs, according to the information contained in this Safety Data Sheet.
<b>Other information:</b>	Do not use the product for any purposes that have not been advised by the manufacturer. In that case, the user could be exposed to unpredictable risks.

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