

Safety Data Sheet

acc. to OSHA HCS

Printing date 11/16/2018

Reviewed on 11/07/2017

1 Identification

· **Product identifier**

· **Trade name:** POWER SYNT 4T SAE 10W/60 JASO MA 2

· **Application of the substance / the mixture**

Only for proper handling.
Engine oil

· **Details of the supplier of the safety data sheet**

· **Manufacturer/Supplier:**

BUCHER AG LANGENTHAL
MOTOREX-Schmiertechnik
Bern-Zürich-Strasse 31
CH-4901 Langenthal
Telefon +41 (0)62 919 75 75

Lube-Tech
Lubrication Technologies, Inc.
900 Mendelssohn Avenue North
US-55427 Golden Valley, Minnesota
Phone: 001 763 417 1357

· **Information department:** msds@motorex.com

· **Emergency telephone number:**

USA + Kanada: 1 800 424 9300 (Chemtrec Chemical Manufacturers Association, Arlington, VA 22209)

2 Hazard(s) identification

· **Classification of the substance or mixture**

Repr. 2 H361 Suspected of damaging fertility or the unborn child.
Aquatic Acute 3 H402 Harmful to aquatic life.
Aquatic Chronic 3 H412 Harmful to aquatic life with long lasting effects.

· **Label elements**

· **GHS label elements**

The product is classified and labeled according to the Globally Harmonized System (GHS).

· **Hazard pictograms**



GHS08

· **Signal word** Warning

· **Hazard statements**

H361 Suspected of damaging fertility or the unborn child.
H402 Harmful to aquatic life.
H412 Harmful to aquatic life with long lasting effects.

· **Precautionary statements**

P101 If medical advice is needed, have product container or label at hand.
P102 Keep out of reach of children.
P103 Read label before use.
P201 Obtain special instructions before use.
P202 Do not handle until all safety precautions have been read and understood.
P273 Avoid release to the environment.
P280 Wear protective gloves/protective clothing/eye protection/face protection.

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P308+P313 IF exposed or concerned: Get medical advice/attention.

P405 Store locked up.

P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

· **Classification system:**· **NFPA ratings (scale 0 - 4)**

Health = 0

Fire = 1

Reactivity = 0

· **HMIS-ratings (scale 0 - 4)**

Health = *0

Fire = 1

Reactivity = 0

· **Other hazards**· **Results of PBT and vPvB assessment**· **PBT:** Not applicable.· **vPvB:** Not applicable.

3 Composition/information on ingredients

· **Chemical characterization: Mixtures**· **Description:** Mixture of the substances listed below with nonhazardous additions.· **Dangerous components:**

CAS: 112-41-4 EINECS: 203-968-4	dodec-1-ene	50-70%
	Flam. Liq. 4, H227	
	Mineralöle (Mischung)	≥1-≤10%
	Asp. Tox. 1, H304	
CAS: 84605-29-8 EINECS: 283-392-8	Phosphorodithioic acid, mixed O,O-bis (1,3-diethylbutyl and iso-Pr)esters, zinc salts	≥0.25-<2.5%
	Eye Dam. 1, H318; Aquatic Chronic 2, H411; Skin Irrit. 2, H315; Aquatic Acute 2, H401	
EC number: 947-519-7	Reaction products of benzenesulfonic acid, mono-C20-24 (even)-sec-alkyl derivs. Para-, calcium salts	≥0.25-<1%
	Skin Sens. 1B, H317	
CAS: 597-82-0 EINECS: 209-909-9	O,O,O-Triphenylthiophosphat	≥0.1-≤0.25%
	Repr. 2, H361	
CAS: 121158-58-5 EC number: 310-154-3 Index number: 604-092-00-9	phenol, dodecyl-, branched	≥0.0025-<0.025%
	Repr. 1A, H360; Skin Corr. 1C, H314; Eye Dam. 1, H318; Aquatic Acute 1, H400; Aquatic Chronic 1, H410	

4 First-aid measures

· **Description of first aid measures**· **After inhalation:** Supply fresh air; consult doctor in case of complaints.

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- **After skin contact:**
Remove residues with soap and water.
Remove contaminated clothing immediately.
- **After eye contact:**
Rinse opened eye for several minutes under running water.
Consult a physician if irritation develops.
- **After swallowing:**
Do not induce vomiting. Do not take in resorption stimulating agents.
Consult a physician who will decide on need and method of emptying the stomach.
- **Information for doctor:**
- **Most important symptoms and effects, both acute and delayed**
No further relevant information available.
- **Indication of any immediate medical attention and special treatment needed**
No further relevant information available.

5 Fire-fighting measures

- **Extinguishing media**
- **Suitable extinguishing agents:** Use fire fighting measures that suit the environment.
- **Special hazards arising from the substance or mixture**
In case of fire carbon, sulphur and phosphorus oxides can be formed.
- **Advice for firefighters**
- **Protective equipment:** No special measures required.

6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures** Not required.
- **Environmental precautions:**
Do not allow product to reach sewage system or any water course.
Inform respective authorities in case of seepage into water course or sewage system.
Do not allow to enter sewers/ surface or ground water.
- **Methods and material for containment and cleaning up:**
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
Dispose contaminated material as waste according to item 13.
- **Reference to other sections**
No dangerous substances are released.
See Section 7 for information on safe handling.
See Section 8 for information on personal protection equipment.
See Section 13 for disposal information.
- **Protective Action Criteria for Chemicals**

· PAC-1:
None of the ingredients is listed.
· PAC-2:
None of the ingredients is listed.
· PAC-3:
None of the ingredients is listed.

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7 Handling and storage

- **Handling:**
- **Precautions for safe handling**
Used oils (motor oils, gear oils, industrial oils) contain components causing skin cancer. Therefore, avoid skin contact by wearing protecting gloves. Carefully clean soiled parts of the skin with soap.
Open and handle receptacle with care.
- **Information about protection against explosions and fires:**
Do not heat above flash point.
Keep respiratory protective device available.
- **Conditions for safe storage, including any incompatibilities**
- **Storage:**
- **Requirements to be met by storerooms and receptacles:** No special requirements.
- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:**
Store containers closed and protect against rain, dust, heat and other atmospheric influences.
Keep receptacle tightly sealed.
- **Storage class:** 10
- **Specific end use(s)** No further relevant information available.

8 Exposure controls/personal protection

- **Additional information about design of technical systems:** No further data; see item 7.
- **Control parameters**
- **Components with limit values that require monitoring at the workplace:**
The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.
- **Additional information:** The lists that were valid during the creation were used as basis.
- **Exposure controls**
- **Personal protective equipment:**
- **General protective and hygienic measures:**
Keep away from foodstuffs, beverages and feed.
Wash hands before breaks and at the end of work.
Store protective clothing separately.
Do not inhale gases / fumes / aerosols.
- **Breathing equipment:**
Not necessary if room is well-ventilated.
Respiratory protection if formation of aerosol or mist: use mask with filter type A2, A2/P2 or ABEK.
- **Protection of hands:**
The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.
Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation
- **Material of gloves**
Protective gloves to EN374, resistant to oil in use. Standard EN 374 Level 3 control G1
The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer.
Fluorocarbon rubber (Viton)
Nitrile rubber, NBR
Recommended thickness of the material: ≥ 0.4 mm

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· **Penetration time of glove material**

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

For the mixture of chemicals mentioned below the penetration time has to be at least 60 minutes (Permeation according to EN 374 Part 3: Level 1).

· **Eye protection:** Goggles recommended during refilling.

· **Body protection:** Protective work clothing

9 Physical and chemical properties

· **Information on basic physical and chemical properties**

· **General Information**

· **Appearance:**

Form: Fluid

Color: Dark yellow

· **Odor:** Characteristic

· **Odor threshold:** Not determined.

· **pH-value:** Not determined.

· **Change in condition**

Melting point/Melting range: Undetermined.

Boiling point/Boiling range: Undetermined.

· **Flash point:** >200 °C (>392 °F)

· **Flammability (solid, gaseous):** Not applicable.

· **Ignition temperature:** 255 °C (491 °F) (DIN 51794)

· **Decomposition temperature:** Not determined.

· **Auto igniting:** Product is not selfigniting.

· **Danger of explosion:** Product does not present an explosion hazard.

· **Explosion limits:**

Lower: Not determined.

Upper: Not determined.

· **Vapor pressure:** < 0.1 hPa (20°C)

· **Density at 20 °C (68 °F):** 0.863 g/cm³ (7.202 lbs/gal) (ASTM D 4052)

· **Relative density** Not determined.

· **Vapor density** Not determined.

· **Evaporation rate** Not determined.

· **Solubility in / Miscibility with**

Water: Not miscible or difficult to mix.

· **Partition coefficient (n-octanol/water):** Not determined.

· **Viscosity:**

Dynamic: Not determined.

Kinematic: 168.3 mm²/s @ 40 °C (DIN 51562-1)

VOC content: 0.00 %

0.0 g/l / 0.00 lb/gal

Solids content: 0.0 %

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· **Other information**

No further relevant information available.

10 Stability and reactivity

- **Reactivity** No further relevant information available.
- **Chemical stability**
- **Thermal decomposition / conditions to be avoided:**
No decomposition if used according to specifications.
- **Possibility of hazardous reactions** No dangerous reactions known.
- **Conditions to avoid** No further relevant information available.
- **Incompatible materials:** No further relevant information available.
- **Hazardous decomposition products:** No dangerous decomposition products known.

11 Toxicological information

· **Information on toxicological effects**· **Acute toxicity:**· **LD/LC50 values that are relevant for classification:**

84605-29-8 Phosphorodithioic acid, mixed O,O-bis (1,3-diethylbutyl and iso-Pr) esters, zinc salts

Oral	NOEL	40 mg/kg/24h (rat)
	NOAEL	160 mg/kg/24h (rat)
Dermal	LD50	2,002 mg/kg (rat)
Inhalative	LC50 / 4h	2.3 mg/l (rat)

121158-58-5 phenol, dodecyl-, branched

Oral	LD50	2,100-2,200 mg/kg (rat)
	NOEL	5-50 mg/kg/24h (rat)
	NOAEL	60-100 mg/kg/24h (rat)
Dermal	LD50	15,000 mg/kg (rabbit)

· **Primary irritant effect:**· **on the skin:** No irritant effect.· **on the eye:** No irritating effect.· **Sensitization:** No sensitizing effects known.· **Additional toxicological information:**

The product shows the following dangers according to internally approved calculation methods for preparations:

· **Carcinogenic categories**· **IARC (International Agency for Research on Cancer)**

None of the ingredients is listed.

· **NTP (National Toxicology Program)**

None of the ingredients is listed.

· **OSHA-Ca (Occupational Safety & Health Administration)**

None of the ingredients is listed.

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12 Ecological information

· Toxicity

· Aquatic toxicity:

84605-29-8 Phosphorodithioic acid, mixed O,O-bis (1,3-diethylbutyl and iso-Pr) esters, zinc salts

LOEC	0.8 mg/l/21d (aquatic invertebrates)
LC50	46 mg/l/96h (fish)
EC50	10,000 mg/l/3h (microorganisms)
LL50	4.5 mg/l/96h (fish)
EL50	23 mg/l/48h (aquatic invertebrates)
EL50	21-24 mg/l/72h (algae / cyanobacteria)
NOEC	0.4-0.8 mg/l/21d (aquatic invertebrates)
NOELR	1.8 mg/l/96h (fish)
NOELR	10 mg/l/48h (aquatic invertebrates)

Reaction products of benzenesulfonic acid, mono-C20-24 (even)-sec-alkyl derivs. Para-, calcium salts

LC50	>1,000 mg/l/96h (Pimephales promelas)
	>100 mg/l/96h (rainbow trout)
EC50	>1,000 mg/l/96h (Alga)

121158-58-5 phenol, dodecyl-, branched

EC50	1,000 mg/l/3h (microorganisms)
EC50	0.106 mg/l/24h (aquatic invertebrates)
EC10	0.53-0.765 mg/l/72h (algae / cyanobacteria)
EC50	0.15-0.765 mg/l/72h (algae / cyanobacteria)
EC50	0.0079-0.0086 mg/l/21d (aquatic invertebrates)
EC100	160 mg/l/48h (aquatic invertebrates)
EC0	0.056 mg/l/48h (aquatic invertebrates)
EC50	0.037-0.0927 mg/l/48h (aquatic invertebrates)
EL50	40 mg/l/96h (fish)
NOEC	0.0037 mg/l/21d (aquatic invertebrates)
NOEC	0.07-0.442 mg/l/72h (algae / cyanobacteria)
NOEC	0.011 mg/l/48h (aquatic invertebrates)
NOEC	1,000 mg/l/3h (microorganisms)
NOELR	25 mg/l/96h (fish)
LOEC	0.012 mg/l/72h (aquatic invertebrates)

· **Persistence and degradability** No further relevant information available.

· **Behavior in environmental systems:**

· Bioaccumulative potential

84605-29-8 Phosphorodithioic acid, mixed O,O-bis (1,3-diethylbutyl and iso-Pr) esters, zinc salts

Partition coefficient	0.56 [---] (log Kow) (Bioaccumulation)
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121158-58-5 phenol, dodecyl-, branched

Partition coefficient	6.1-7.14 [---] (log Kow) (Bioaccumulation)
Biologische Abbaubarkeit	<10 % (28d) (Biodegradability) (OECD 302 D)

· **Mobility in soil** No further relevant information available.

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- **Ecotoxical effects:**
- **Remark:** Harmful to fish
- **Additional ecological information:**
- **General notes:**
 Water hazard class 1 (according to Appendix 1 AwSV): slightly hazardous for water
 Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.
 Harmful to aquatic organisms
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **Other adverse effects** No further relevant information available.

13 Disposal considerations

- **Waste treatment methods**
- **Recommendation:**
 Must not be disposed of together with household garbage. Do not allow product to reach sewage system.
 Contact waste processors for recycling information.
- **Uncleaned packagings:**
- **Recommendation:** Disposal must be made according to official regulations.

14 Transport information

- | | |
|--|-----------------|
| · UN-Number | Void |
| · DOT, ADR/RID/ADN, ADN, IMDG, IATA | Void |
| · UN proper shipping name | Void |
| · DOT, ADR/RID/ADN, ADN, IMDG, IATA | Void |
| · Transport hazard class(es) | Void |
| · DOT, ADR/RID/ADN, ADN, IMDG, IATA | Void |
| · Class | Void |
| · Packing group | Void |
| · DOT, ADR/RID/ADN, IMDG, IATA | Void |
| · Environmental hazards: | No |
| · Marine pollutant: | No |
| · Special precautions for user | Not applicable. |
| · Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code | Not applicable. |
| · UN "Model Regulation": | Void |

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15 Regulatory information

- **Safety, health and environmental regulations/legislation specific for the substance or mixture**
- **Sara**

- **Section 355 (extremely hazardous substances):**

None of the ingredients is listed.

- **Section 313 (Specific toxic chemical listings):**

122-39-4 diphenylamine

- **TSCA (Toxic Substances Control Act):**

112-41-4 dodec-1-ene

26401-35-4 DTDA

8042-47-5 White mineral oil, petroleum

597-82-0 O,O,O-Triphenylthiophosphat

91273-04-0 N,N-bis(2-ethylhexyl)-((1,2,4-triazol-1-yl)methyl)amine

122-39-4 diphenylamine

106-20-7 bis(2-ethylhexyl)amine

288-88-0 1,2,4-triazole

- **TSCA new (21st Century Act) (Substances not listed)**

Mineralöle (Mischung)

84605-29-8 Phosphorodithioic acid, mixed O,O-bis (1,3-diethylbutyl and iso-Pr)esters, zinc salts

Reaction products of benzenesulfonic acid, mono-C20-24 (even)-sec-alkyl derivs. Para-, calcium salts

597-82-0 O,O,O-Triphenylthiophosphat

121158-58-5 phenol, dodecyl-, branched

- **Proposition 65**

- **Chemicals known to cause cancer:**

None of the ingredients is listed.

- **Chemicals known to cause reproductive toxicity for females:**

None of the ingredients is listed.

- **Chemicals known to cause reproductive toxicity for males:**

None of the ingredients is listed.

- **Chemicals known to cause developmental toxicity:**

None of the ingredients is listed.

- **Carcinogenic categories**

- **EPA (Environmental Protection Agency)**

None of the ingredients is listed.

- **TLV (Threshold Limit Value established by ACGIH)**

122-39-4 diphenylamine

A4

- **NIOSH-Ca (National Institute for Occupational Safety and Health)**

None of the ingredients is listed.

- **Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

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16 Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

The classification of the mixture was carried out by calculation in accordance with the rules laid down in Annex I of Regulation (EC) No 1272/2008.

No special training instructions to ensure protection of human health and environment are required.

· **Department issuing SDS:** Abteilung Produktsicherheit

· **Date of preparation / last revision** 11/16/2018 / -

· **Abbreviations and acronyms:**

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

DOT: US Department of Transportation

IATA: International Air Transport Association

ACGIH: American Conference of Governmental Industrial Hygienists

EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

NFPA: National Fire Protection Association (USA)

HMS: Hazardous Materials Identification System (USA)

VOC: Volatile Organic Compounds (USA, EU)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative

NIOSH: National Institute for Occupational Safety

OSHA: Occupational Safety & Health

TLV: Threshold Limit Value

PEL: Permissible Exposure Limit

REL: Recommended Exposure Limit

Flam. Liq. 4: Flammable liquids – Category 4

Skin Corr. 1C: Skin corrosion/irritation – Category 1C

Skin Irrit. 2: Skin corrosion/irritation – Category 2

Eye Dam. 1: Serious eye damage/eye irritation – Category 1

Skin Sens. 1B: Skin sensitisation – Category 1B

Repr. 1A: Reproductive toxicity – Category 1A

Repr. 2: Reproductive toxicity – Category 2

Asp. Tox. 1: Aspiration hazard – Category 1

Aquatic Acute 1: Hazardous to the aquatic environment - acute aquatic hazard – Category 1

Aquatic Acute 2: Hazardous to the aquatic environment - acute aquatic hazard – Category 2

Aquatic Acute 3: Hazardous to the aquatic environment - acute aquatic hazard – Category 3

Aquatic Chronic 1: Hazardous to the aquatic environment - long-term aquatic hazard – Category 1

Aquatic Chronic 2: Hazardous to the aquatic environment - long-term aquatic hazard – Category 2

Aquatic Chronic 3: Hazardous to the aquatic environment - long-term aquatic hazard – Category 3

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