

Enhanced PAG

PAG Refrigeration Lubricant with Performance Enhancer

Safety Data Sheet (SDS)

OSHA HazCom Standard 29 CFR 1910.1200(g), Rev. 2012 and GHS Rev 03.

1. Identification

Product identifier

Trade name Enhanced PAG

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

Product description PAG Refrigeration Lubricant with Performance Enhancer

Details of the supplier of the safety data sheet

Manufacturer/supplier Santech Industries
1401 Valley View Lane #100, Irving, TX 75061
817-509-2518

Emergency telephone number 817-509-2518

2. Hazard(s) Identification

Classification of the substance or mixture Acute Tox. 4. - H302. Harmful if swallowed
Skin Irrit. 2. - H315. Causes skin irritation
Eye Irrit. 2B - H320. Causes eye irritation
Skin Sen. - H317. May cause an allergic skin reaction

Label elements

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

Hazard pictograms



GHS07

Signal word

Warning

Hazard-determining components of labeling

91-20-3 Naphthalene

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2. Hazard(s) Identification (continued)

Hazard statements	Harmful if swallowed. Causes skin irritation. Causes serious eye irritation. May cause an allergic skin reaction.
Precautionary statements	Avoid breathing dust/fume/gas/mist/vapors/spray Wear protective gloves. Wear eye protection / face protection. Avoid release to the environment. Wash thoroughly after handling. Do not eat, drink or smoke when using this product. Contaminated work clothing must not be allowed out of the workplace. Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If swallowed: Call a poison center/doctor if you feel unwell. Specific treatment (see on this label). Wash contaminated clothing before reuse. IF exposed or concerned: Get medical advice/attention. If skin irritation or rash occurs: Get medical advice/attention. If eye irritation persists: Get medical advice/attention. Rinse mouth. If on skin: Wash with plenty of water. Take off contaminated clothing and wash it before reuse. Dispose of contents/container in accordance with local/regional/national/international regulations.

Classification system

NFPA ratings (scale 0-4)



Health=1; Fire=1; Reactivity=0

HMIS-ratings (scale 0 - 4)

HEALTH	1
FIRE	1
REACTIVITY	0

Health=1; Fire=1; Reactivity=0

Other Hazards

None known

3. Composition / Information on Ingredients

Chemical characterization:

Mixtures

Description:

Mixture of the substances listed below with nonhazardous additions.

Dangerous Components

91-20-3	Naphthalene ⚠ Acute Tox. 4, H320, Skin Irrit. 2, H315, Eye Irrit 2B, H320, Skin Sens. 1, H317	≤ 2.5%
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4. First-aid Measures

Description of first aid measures

General information	Symptoms may even occur after several hours; therefore observe area effected for at least 48 hours after the accident.
After inhalation	In case of unconsciousness, place patient securely on side position for transportation.
After skin contact	Immediately wash with water and soap and rinse thoroughly. If skin irritation continues, consult a doctor.
After eye contact	Rinse opened eye for at least 15 minutes under running water. If symptoms persist, consult a doctor.
After swallowing	Do not induce vomiting without medical advice. Get medical attention.

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	Water, carbon dioxide, foam or dry extinguishing media. Use fire fighting measures that suit the environment.
Special hazards arising from the substance or mixture	If incinerated, product may release toxic gases including: Carbon Oxides and Nitrogen Oxides (NOx).
Advice for firefighters	
Protective equipment	As in any fire, wear self-contained breathing apparatus pressure-demand (NIOSH approved or equivalent), and full protective gear to prevent contact with skin and eyes.

6. Accidental Release Measures

Personal precautions, protective equipment and emergency procedures	Particular danger of slipping on leaked/spilled product. Keep away from ignition sources. Avoid contact with skin, eyes and clothing. Proper protective equipment should be used.
Environmental precautions	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	After material has been absorbed, area may be flushed with water or wet-brushed to clean. Absorb with liquid-binding material (ie. sand, diatomite, acid binders, universal binders, sawdust). Dispose contaminated material as waste according to section 13. Ensure adequate ventilation. Dispose of the collected material according to regulations.
Reference to other sections	See Section 7 for information on safe handling. See Section 8 for information on personal protection equipment. See Section 13 for disposal information.

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7. Handling and Storage

Handling

Precautions for safe handling	Keep away from sources of ignition. Store in cool, dry place in tightly closed receptacles. Ensure good ventilation/exhaustion at the workplace. Prevent formation of aerosols.
Information about protection against explosions and fires	No special measures required.
Conditions for safe storage, including any incompatibilities	Store away from strong acids, strong bases, strong oxidizing agents, strong reducing agents, and Alkalis.

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	Keep receptacle tightly sealed.
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 section 7.
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Control parameters

Ingredients with limit values that require monitoring at workplace	This product does not contain any relevant quantities of materials with critical values that have to be monitored at a workspace.
DNELs	No further relevant information
PNECs	No further relevant information
Additional Information	The list value during the making were used as a basis

Exposure controls

Personal protective equipment

General protective and hygienic measures	Keep away from foodstuffs, beverages and feed. Immediately remove all soiled and contaminated clothing. Wash hands before breaks and at the end of work. Avoid contact with the eyes and skin.
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Breathing equipment	Not required.
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Protection of hands



Protective gloves.

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation. Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/the chemical mixture. Select glove material based on penetration times, rates of diffusion and degradation.

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Material of gloves 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. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

8. Exposure Controls / Personal Protection (continued)

Penetration time of glove material The exact break-through time has to be determined and observed by the manufacturer of the protective gloves.

Eye protection Safety glasses

9. Physical and Chemical Properties

Information on basic physical and chemical properties

General Information

Appearance

Form	Liquid
Color	Clear amber
Odor	Characteristic
Odor threshold	Not determined.
pH-value	Not determined.

Change in condition

Melting point/Melting range	Not determined.
Boiling point/Boiling range	> 200°C (> 392°F)
Flash point	> 218°C (> 424°F)
Flammability (solid, gaseous):	Not applicable.
Ignition temperature	350°C (662°F)
Decomposition temperature	Not determined.
Auto igniting	Product is not self-igniting.
Danger of explosion	Product does not present an explosion hazard.

Explosion limits

Lower	Not determined.
Upper	Not determined.
Vapor pressure @ 25°C (77°F)	<0.001 kPa
Density @ 20°C (68°F)	0.91 g/cm ³ (7.594 lbs/gal)
Relative density	Not determined.
Vapor density	Not determined.
Evaporation rate	Not determined.
Solubility in / Miscibility with water	Insoluble.
Partition coefficient (n-octanol/water):	Not determined.

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9. Physical and Chemical Properties (continued)

Viscosity

Dynamic	Not determined.
Kinematic	Not determined.

Solvent content

Organic solvents	0.0 %
Other information	No further relevant information available.

10. Stability and Reactivity

Reactivity	Stable under normal conditions
Chemical stability	Stable under normal conditions.
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	Strong acids, strong bases, strong oxidizing agents, strong reducing agents, and Alkalis.
Hazardous decomposition products	Carbon Oxides and Nitrogen Oxides (NOx).

11. Toxicological Information

Information on toxicological effects The toxicity of this product is unknown.

Acute toxicity

LD/LC50 values that are relevant for classification

91-20-3 Naphthalene	Oral: LD50 490 mg/kg (rat) Dermal: LD50 5000 mg/kg (rat) Inhalative: LC50/4 h 0.34 mg/l (rat)
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Primary irritant effect:

on the skin:	Irritant to skin and mucous membranes. May cause an allergic skin reaction.
on the eye:	Irritating effect. Causes serious eye irritation.
Additional toxicological information:	The product shows the following dangers according to internally approved calculation methods for preparations: Harmful. Irritant.

12. Ecological Information

Toxicity

Aquatic toxicity:	Avoid release into the environment. Runoff from fire control or dilution water may cause pollution. 91-20-3 Naphthalene: EC50 1.00-3.40 mg/l (daphnia)
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Persistence and degradability	No further relevant information available.
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Behavior in environmental systems

Bioaccumulative potential	No further relevant information available.
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12. Ecological Information (continued)

Mobility in soil	No further relevant information available.
Ecotoxicological effects	
Remark	No further information available
Additional ecological information	
General notes:	Do not allow product to reach ground water, water course or sewage system
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.
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Uncleaned packagings

Recommendation	Dispose of as unused product. Disposal must be made according to official regulations.
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14. Transportation Information

UN-Number

DOT, ADR, IMDG, IATA	Non-Regulated Material
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UN proper shipping name

DOT, ADR, ADN, IMDG, IATA	Non-Regulated Material
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Transport hazard class(es)

DOT, ADR, ADN, IMDG, IATA	Class: Non-Regulated Material
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Packing group

DOT, ADR, IMDG, IATA	Non-Regulated Material
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Environmental hazards

Marine pollutant	No
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Special precautions for user	Not applicable.
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Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code	Not applicable.
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UN "Model Regulation"	--
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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 are listed

Section 313 (Specific toxic chemical listings): None of the ingredients are listed

TSCA (Toxic Substances Control Act): 91-20-3 Naphthalene

Proposition 65

Chemicals known to cause cancer: None of the ingredients are listed

Chemicals known to cause reproductive toxicity for females: None of the ingredients are listed

Chemicals known to cause reproductive toxicity for males: None of the ingredients are listed

Chemicals known to cause developmental toxicity: None of the ingredients are listed

Carcinogenic categories

EPA (Environmental Protection Agency) 91-20-3 Naphthalene

TLV (Threshold Limit Value established by ACGIH) 91-20-3 Naphthalene

NIOSH-Ca (National Institute for Occupational Safety and Health) None of the ingredients are listed.

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

Hazard pictograms



GHS07

Signal word

Warning

Hazard-determining components of labeling

91-20-3 Naphthalene

Hazard statements

Harmful if swallowed. Causes skin irritation. Causes serious eye irritation. May cause an allergic skin reaction. Suspected of causing cancer. Harmful to aquatic life with long lasting effects.

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16. Other Information

The information and recommendations in this safety data sheet are, to the best of our knowledge, accurate as of the date of issue. Nothing herein shall be deemed to create warranty, expressed or implied and shall not establish a legally valid contractual relationship. It is the responsibility of the user to determine applicability of this information and the suitability of the material or product for any particular purpose.

Date of preparation / last revision 02/04/2015 / -

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)
ADN: The European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways
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)
HMIS: Hazardous Materials Identification System (USA)
LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent
: Flammable liquids, Hazard Category 4
Acute Tox. 4: Acute toxicity, Hazard Category 4
Skin Irrit. 2: Skin corrosion/irritation, Hazard Category 2
Eye Dam. 1: Serious eye damage/eye irritation, Hazard Category 1
Eye Irrit. 2A: Serious eye damage/eye irritation, Hazard Category 2A
Skin Sens. 1: Sensitisation - Skin, Hazard Category 1
Carc. 2: Carcinogenicity, Hazard Category 2
Aquatic Acute 1: Hazardous to the aquatic environment - AcuteHazard, Category 1
: Hazardous to the aquatic environment - AcuteHazard, Category 3
Aquatic Chronic 1: Hazardous to the aquatic environment - Chronic Hazard, Category 1
Aquatic Chronic 3: Hazardous to the aquatic environment - Chronic Hazard, Category 3

SDS created by MSDS Authoring Services
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Data compared to the previous version altered



Santech[®]

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