

SAFETY DATA SHEET

Astemo

Mobility Beyond

1. PRODUCT AND COMPANY IDENTIFICATION

MSDS Number: AF-SDS-070

Version Date: 05.06.2024

Product Name: 4E ENGINE OIL 5W40SN

Product Use: ENGINE OIL 5W40 SN

Synonyms: No information available

Company Information

Hitachi Astemo India Private Limited.

Formerly known as Hitachi Astemo Brake Systems India Private Limited

A606 & B606, 6th Floor, International Convention Centre, MCCA Trade Towers,
Senapati Bapat Road, Shivajinagar, Pune MH 411016 IN

2. COMPONENT INFORMATION

2.2 Mixtures

Mixture

Product/Ingredient name	Identifiers	%	Classification Regulation (EC) No. 1272/2008 [CLP]	Type
Distillate (petroleum), hydro treated Heavy Paraffinic, Distillate (petroleum), hydro treated Light Paraffinic	CAS: 64742-54-7 CAS : 64742-55-8	10 – 20 20 – 80	Asp. Tox. 1, H304	[1]
Phosphorodithioic acid, mixed O,O-bis (2-ethylhexyl and iso-Bu and iso-Pr) esters, zinc salts	85940-28-9 Proprietary	1- 2,4	Skin Irrit. 2, H315 Eye Dam. 1, H318 Aquatic Chronic 4, H413 Aquatic Chronic 2, H411	[1]

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 or vPvBs 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

[2] Substance with a workplace exposure limit

[3] Substance meets the criteria for PBT according to Regulation (EC) No. 1907/2006, Annex XIII

[4] Substance meets the criteria for vPvB according to Regulation (EC) No. 1907/2006, Annex XIII

[5] Substance of equivalent concern

3. HAZARDS IDENTIFICATION

3.1 Classification of the substance or mixture

Product definition

Mixture

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

Asp. Tox. 1, H304

The product is classified as hazardous according to Regulation (EC) 1272/2008 as amended. See Section 16 for the full text of the H statements declared above.

3.2 Label elements

Hazard pictograms



Signal word

Danger

Hazard statements

H 304 : May be fatal if swallowed and enters airways.

Precautionary statements

Prevention

Not applicable

Response

P301 + P310 + P331 - IF SWALLOWED: Immediately call a POISON CENTER or physician. Do NOT induce vomiting.
P405 - Store locked up.

Storage

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

Disposal

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

3.3 Other hazards

Substance meets the criteria for PBT according to Regulation (EC) No. 1907/2006, Annex XIII

Not applicable

Substance meets the criteria for vPvB according to Regulation (EC) No. 1907/2006, Annex XIII.

Not applicable

4. FIRST AID INFORMATION

4.1 Description of first aid measures

Eye contact

Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If irritation, blurred vision or swelling occurs and persists, obtain medical advice from a specialist. If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing. If casualty is unconscious and:

Inhalation

If not

	breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. Get medical attention if adverse health effects persist or are severe. Maintain an open airway. Wash with soap and water. Remove contaminated clothing and shoes. Handle with care and dispose of in a safe manner. Seek medical attention if skin irritation, swelling or redness develops and persists.
Skin contact	Accidental high pressure injection through the skin requires immediate medical attention. Do not wait for symptoms to develop. Always assume that aspiration has occurred. Do not induce vomiting. Can enter lungs and cause damage. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Seek professional medical attention or send the casualty to a hospital. Do not wait for symptoms to develop.
Ingestion	Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband. No action shall be taken involving any personal risk or without suitable training. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation.
Protection of first-aiders	Before attempting to rescue casualties, isolate area from all potential sources of ignition including disconnecting electrical supply. Ensure adequate ventilation and check that a safe, breathable atmosphere is present before entry into confined spaces.

4.2 Most important symptoms and effects, both acute and delayed

Potential acute health effects

Eye contact	Eye contact may cause redness and transient pain.
Inhalation	Inhalation of oil mist or vapours at elevated temperatures may cause respiratory irritation.
Skin contact	No known significant effects or critical hazards.
Ingestion	May be fatal if swallowed and enters airways.

4.3 Indication of any immediate medical attention and special treatment needed

Notes to physician	Due to low viscosity there is a risk of aspiration if the product enters the lungs. Treat symptomatically.
Specific treatments	Always assume that aspiration has occurred.

5. FIRE AND EXPLOSION INFORMATION

5.1 Extinguishing media

Suitable extinguishing media	Dry chemicals. Foam. Carbon dioxide (CO ₂). Water spray or foam.
Unsuitable extinguishing media	Do not use direct water jets on the burning product; they could cause splattering and spread the fire. Simultaneous use of foam and water on the same surface is to be avoided as water destroys the foam.

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.
Hazardous thermal decomposition products	This substance will float and can be reignited on surface water. Incomplete combustion is likely to give rise to a complex mixture of airborne solid and liquid particulates, gases, including carbon monoxide, H ₂ S, SO _x (sulfur oxides) or sulfuric acid and unidentified organic and inorganic compounds.

5.3 Advice for fire-fighters

Special precautions 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. Clothing for fire-fighters (including helmets, protective boots and gloves) conforming to European standard EN 469 will provide a basic level of protection for chemical incidents.

6. ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures

For non-emergency personnel	<p>Avoid breathing vapour or mist. 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. Stop leak if safe to do so. Avoid direct contact with the product. Stay upwind/keep distance from source. In case of large spillages, alert occupants in downwind areas.</p> <p>Eliminate all ignition sources if safe to do so. Spillages of limited amounts of product, especially in the open air when vapours will be usually quickly dispersed, are dynamic situations, which will presumably limit the exposure to dangerous concentrations. Note : 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</p>
For emergency responders	<p>For this reason, local experts should be consulted when necessary. Local regulations may also prescribe or limit actions to be taken. Small spillages: normal antistatic working clothes are usually adequate. Large spillages: full body suit of chemically resistant and thermal resistant material should be used. Work gloves providing adequate chemical resistance, specifically to aromatic</p>

hydrocarbons.

Note : gloves made of PVA are not water-resistant, and are not suitable for emergency use. Safety 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 H₂S) 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.

6.2 Environmental precautions Prevent product from entering sewers, rivers or other bodies of water. If necessary dike the product with dry earth, sand or similar non-combustible materials. In case of soil contamination, remove contaminated soil and treat in accordance with local regulations. In case of small spillages in closed waters (i.e. ports), contain product with floating barriers or other equipment. Collect spilled product by absorbing with specific floating absorbents. If possible, large spillages in open waters should be contained with floating barriers or other mechanical means. If this is not possible, control the spreading of the spillage, and collect the product by skimming or other

suitable mechanical means. The use of dispersants should be advised by an expert, and, if required, approved by local authorities

6.3 Methods and material for containment and cleaning up

Small spill

Stop leak if without risk. Absorb spilled product with suitable non- combustible materials.

Large spill

Large spillages may be cautiously covered with foam, if available, to limit vapour cloud formation. Do not use water jet. When inside buildings or confined spaces, ensure adequate ventilation. Transfer collected product and other contaminated materials to suitable containers for recovery or safe 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.

7. HANDLING AND STORAGE INFORMATION

7.1 Advice on general occupational hygiene Storage

Ensure that proper housekeeping measures are in place. Contaminated materials should not be allowed to accumulate in the workplaces and should never be kept inside the pockets. Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Wash hands

thoroughly after handling. Change contaminated clothes at the end of working shift. See also Section 8 for additional information on hygiene measures.

7.2 Conditions for safe storage, including any incompatibilities

Storage area layout, tank design, equipment and operating procedures must comply with the relevant regional, national or local legislation. Storage installations should be designed with adequate bunds in case of 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. Store separately from oxidising agents. Recommended materials for containers, or container linings use mild steel, stainless steel. Not suitable : 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. Keep only in the original container or in a suitable container for this kind of product. Keep container tightly closed and sealed until ready for use. Do not store in unlabelled containers. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Empty containers may contain harmful, flammable/combustible or explosive residue or vapours. Do not cut, grind, drill, weld, reuse or dispose of containers unless adequate precautions are taken against these hazards. Store locked up. Protect from sunlight.

7.3 Specific end use(s)

Recommendations

Industrial sector specific solutions

Not available
Not available

8. EXPOSURE CONTROLS / PERSONAL PROTECTION INFORMATION

The list of Identified Uses in Section 1 should be consulted for any available use-specific information provided in the Exposure Scenario(s).

8.1 Control parameters

Occupational exposure limits

Product/Ingredient name	Exposure limits values
Distillate (petroleum), hydro treated Heavy Naphthenic	PEL 5 mg/m ³ Mist.

Recommended monitoring procedures If this product contains ingredients with exposure limits, personal, workplace atmosphere or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment. Reference should be made to monitoring standards, such as the following: European Standard EN 689 (Workplace atmospheres - Guidance for the assessment of exposure by inhalation to chemical agents for comparison with limit values and measurement strategy) European Standard EN 14042

(Workplace atmospheres - Guide for the application and use of procedures for the assessment of exposure to chemical and biological agents) European Standard EN 482 (Workplace atmospheres - General requirements for the performance of procedures for the measurement of chemical agents) Reference to national guidance documents for methods for the determination of hazardous substances will also be required.

8.2 Exposure Control
Appropriate engineering Controls

Mechanical ventilation and local exhaust will reduce exposure via the air. Use oil resistant material in construction of handling equipment. Store under recommended conditions and if heated, temperature control equipment should be used to avoid overheating.

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. Ensure that eyewash stations and safety showers are close to the workstation location. Wash contaminated clothing before reuse. Recommended: Safety glasses with side shields.

- Eye/face protection
- Skin protection
- Hand protection
- Body protection

4 - 8 hours (breakthrough time): nitrile rubber
 Wear protective clothing if there is a risk of skin contact. Change contaminated clothes at the end of working shift. Appropriate footwear and any additional skin protection measures

Other skin protection

should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Respiratory protection

Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator. Use a properly fitted, particulate filter respirator complying with an approved standard if a risk assessment indicates this is necessary.

- 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.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance: Clear	Odor: Motor oil odor
Physical State : Liquid	
Colour : Yellow to Brown	Mineral oil,



pH: No data available	Viscosity @ 100°C : 9.5 to 12.5 cSt
	Viscosity, Kinematic @ 40°C: .0 mm ² /s (100°C) (ASTM D445)
Melting Point/ Pour Point : < -30°C	Solubility in Water: Insoluble in water
Flash point : > 200°C ,	Density : 0.850 max at 29.5°C

10. STABILITY AND REACTIVITY INFORMATION

10.1 Reactivity	No specific test data related to reactivity available for this product or its ingredients.
10.2 Chemical stability	Stable under normal conditions
10.3 Possibility of hazardous Reactions	Under normal conditions of storage and use, hazardous reactions will not occur. Oxidising agent. Keep away from extreme heat and oxidizing agents.
10.4 Conditions to avoid	Incomplete combustion is likely to give rise to a complex
10.5 Incompatible materials	mixture of airborne solid and liquid particulates, gases,
10.6 Hazardous decomposition products	including carbon monoxide, H ₂ S, SO _x (sulfur oxides) or sulfuric acid and unidentified organic and inorganic compounds.

11. TOXICOLOGICAL INFORMATION

Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
Distillate (petroleum), hydro treated Heavy Paraffinic, Distillate (petroleum), hydro treated Light Paraffinic	LC50 Inhalation Dusts and mists	Rat	>5.53 mg/l	4 hours
	LD50 Dermal	Rabbit	>5000 mg/kg	-
	LD50 Oral	Rat	>5000 mg/kg	-
	LC50 fish 1	Fish 1	4,4 mg/l	-
Phosphorodithioic acid, mixed O,O-bis(2- ethylhexyl and iso-Bu and iso-Pr) esters, zinc salts	EC50 Inhalation	Rat	2.3 mg/kg	4 hours
	LD 50 Dermal	Rat	>20000mg/kg	-
	LD 50 Oral	Rat	>3080mg/kg	-
	LD 50 Oral	Rat		-

Irritation/Corrosion

Skin No known significant effects or critical hazards.

Eye No known significant effects or critical hazards.

Respiratory No known significant effects or critical hazards.

Sensitisation

Skin No known significant effects or critical hazards.

Respiratory No known significant effects or critical hazards.

Mutagenicity No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.

Carcinogenicity The base oil(s) in this product is based on an severely hydrotreated

Reproductive toxicity	distillate. The product should not be regarded as a carcinogen.
Specific target organ toxicity - single exposure	Contains no ingredient listed as toxic to reproduction.
Specific target organ toxicity - repeated exposure	Not classified
Aspiration hazard	Not classified
Information on likely routes of exposure	Aspiration hazard - Category 1
<u>Potential acute health effects</u>	Not available.
Eye contact	Eye contact may cause redness and transient pain.
Inhalation	Inhalation of oil mist or vapours at elevated temperatures may cause respiratory irritation.
Skin contact	No known significant effects or critical hazards.
Ingestion	May be fatal if swallowed and enters airways.
<u>Potential chronic health effects</u>	
General	No known significant effects or critical hazards.
Carcinogenicity	The base oil(s) in this product is based on an severely hydrotreated distillate. The product should not be regarded as a carcinogen.
Mutagenicity	No known significant effects or critical hazards.
Teratogenicity	No known significant effects or critical hazards
Product/ingredient name	No known significant effects or critical hazards
Fertility effects	No known significant effects or critical hazards
Other information	Not available.
Specific hazard	

12. ECOLOGICAL INFORMATION

12.1 Toxicity	Not expected to be harmful to aquatic organisms.
12.2 Persistence and degradability	Not inherently biodegradable
12.3 Bio accumulative potential	Bio accumulation is unlikely to be significant because of the low water solubility of this product.
12.4 Mobility in soil	Not considered mobile.
12.5 Results of PBT & vPvB	Not applicable.
Assessment	
12.6 Other adverse effects	Insoluble in water. Spills may form a film on water surfaces causing physical damage to organisms. Oxygen transfer could also

be impaired.

13. DISPOSAL INFORMATION

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

Where possible (e.g. in the absence of relevant contamination), recycling of used substance is feasible and recommended. This substance can be burned or incinerated, subject to national/local authorizations, relevant contamination limits, safety regulations and air quality legislation.

Contaminated or waste substance (not directly recyclable): Disposal can be carried out directly, or by delivery to qualified waste handlers. National legislation may identify a specific organization, and/or prescribe composition limits and methods for recovery or disposal.

Hazardous waste

Yes

European waste catalogue EWC)

Waste code

13 03 07*

Waste designation

mineral-based non-chlorinated insulating and heat transmission oils

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.

14. TRANSPORTATION INFORMATION

International transport regulations

	ADR/ RID	ADN	IMO/IMDG Classification	ICAO/IATA Classification
14.1 UN number	Not regulated.	Not regulated.	Not regulated.	Not regulated.
14.2 UN proper shipping name	-	-	-	-
14.3 Transport hazard class(es)	-	-	-	-
14.4 Packing group	-	-	-	-
14.5 Environmental hazards	No	No	No	No
Additional information	-	-	-	-

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 Transport in bulk according to Annex I of MARPOL 73/78 and the IBC Code

Oils

15. Regulatory Information

Regulatory Lists Searched: The components listed in Section 2 of this MSDS were compared to substances that appear on the following regulatory lists. Each list is numerically identified. See Regulatory Search Results below.

Health & Safety: 10 - IARC carcinogen, 11 - NTP carcinogen, 12 - OSHA carcinogen, 15 - ACGIH TLV, 16 - OSHA PEL, 17 - NIOSH exposure limit, 20 - US DOT Appendix A, Hazardous substances, 22 - FDA 21 CFR Total food additives, 23 - NFPA 49 or 325

Environmental: 30 - CAA 1990 Hazardous air pollutants, 31 - CAA Ozone depleters, 33 - CAA HON rule, 34 - CAA Toxic substance for accidental release prevention, 35 - CAA Volatile organic compounds (VOC's) in SOCMII, 41 - CERCLA / SARA Section 302 extremely hazardous substances, 42 - CERCLA / SARA Section 313 emissions reporting, 43 - CWA Hazardous substances, 44 - CWA Priority pollutants, 45 - CWA Toxic pollutants, 46 - EPA Proposed test rule for hazardous air pollutants, 47 - RCRA Basis for listing - Appendix VII, 48 - RCRA waste, 49 - SDWA - (S)MCLs

International: 50 - Canada - WHMIS Classification of substance, 54 - Mexico - Drinking water ecological criteria, 55 - Mexico - Wastewater discharges, 56 - US -TSCA Section (12)(b) - export notification

State Lists: 60 - CA - Proposition 65, 61 - FL - Substances, 62 - MI - Critical materials, 63 - MA - RTK, 64 - MA - Extraordinarily hazardous substances, 65 - MN - Hazardous substances, 66 - PA - RTK, 67 - NJ - RTK, 68 - NJ - Environmental hazardous substances, 69 - NJ - Special hazardous substances

Inventories: 80 - Canada - Domestic substances , 81 - European - EINECS, 82 - Japan - ENCS, 83 - Korea

- Existing and evaluated chemical substances, 84 - US - TSCA , 85 - China Inventory

Regulatory Search Results:

HYDROTREATED HEAVY PARAFFINIC PETROLEUM DISTILLATES: 80, 81, 83, 84, 85

HYDROTREATED LIGHT NAPHTHENIC PETROLEUM DISTILLATE: 63, 64, 80, 81, 83, 84, 85

SOLVENT-DEWAXED HEAVY PARAFFINIC DISTILLATE: 80, 81, 83, 84, 85

ZINC ALKYL DITHIOPHOSPHATE: 80, 81, 83, 84, 85

U.S. TSCA Inventory: All components of this material are on the US TSCA Inventory.

SARA Section 313: Consumer products are not regulated under SARA, Title III, Section 313.

IARC: No information available

SARA 311 / 312 Categories

Acute: --Chronic: --Fire: --Pressure: --Reactive: -Not Regulated: X

Canadian WHMIS Classification

Not a controlled substance under WHMIS

European Union Classification Hazard Symbols:

No information available

Risk Phrases: No information available

Safety Phrases: No information available

Other: No information available

16. OTHER INFORMATION

Health and Environmental Label Language

Back Label (updated 2-2003):

CAUTION: May cause skin and eye irritation. PRECAUTIONARY MEASURES: Avoid prolonged or repeated contact with eyes, skin or clothing. Wash skin with soap and water after handling. KEEP OUT OF REACH OF CHILDREN.

MSDS Revisions Previous Version Date: -----

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