DANA LUBRICANTS FACTORY L.L.C

(A Division of DANA Group)



Registered company by IIC (No: JU-11148)

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MATERIAL SAFETY DATA SHEET

Product Name: SYNTHETIC GEAR OIL 320

HS CODE: 27101951

1. IDENTIFICATION OF SUBSTANCE/PREPARATION AND COMPANY

Product Name: SYNTHETIC GEAR OIL 320

Company Identification: Dana Lubricants Factory LLC(Division Of Dana Group)

Plot no 283, Opposite Hamriya Free Zone Phase 2, Al Jurf Industrial Area, Ajman

Telephone: 00971-4-2217273 Fax: 00971-4-2215940

2. COMPOSITION / INFORMATION ON INGREDIENTS

Composition: SYNTHETIC GEAR OIL 320

Chemical composition: Synthetic and paraffinic solvent highly refined base stocks blended with additive packages.

The composition of this product is proprietary information. In general, the product does not contain any component that may be a significant health and safety hazard as long as normal precautions in greases are observed and good standards of industrial and personal hygiene are maintained.

3. HAZARDS IDENTIFICATION

According to experience, product is considered to be harmless to health if handled correctly

4. FIRST & MEASURES

General Information: Remove contaminated clothing immediately, to be disposed of or washed before reuse.

Inhalation: If inhaled, provide fresh air, warmth, rest and medical advice if necessary.

Skin Contact: Clean areas of skin affected with soap and copious water. If necessary seek medical advice.

Eye Contact: In case of contact with eyes, rinse immediately with plenty of water until irritation subsides.

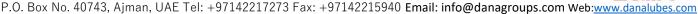
Ingestion: Allow the patient to vomit on his own accord. Give copious water to drink and seek

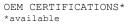
medical help if necessary.























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5.FIRE FIGTING MEASURES

Extinguishing Media: To suit local surroundings (e.g. water spray, carbon dioxide foam, chemical powder).

Special Exposure: Hazard Decomposition products released in a fire should be considered as probably harmful if inhale (refer to Stability and Reactivity section).

Protective Equipment: Wear self-contained breathing apparatus.

6. ACCIDENTAL RELEASE MEASURES

Methods for Cleaning Up Take up with absorbent material, eg sand, sawdust and dispose of as prescribed.

Do not allow to get into waste water or waterways; if this occurs, inform the relevant

authority at once.

7. HANDLING & STORAGE

Advice on Safe Handling: Handle in accordance with good hygiene and safety practice. Avoid temperatures > 65 °C

Advice on Protection against Fire & Explosion : N/A

Storage Conditions - Ensure adequate ventilation of storage area. Keep container tightly closed, cool (< 65°C) and dry

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Exposure Controls: Monitoring of the workplace should be considered in accordance with EH40 (or equivalent) Controls. LTEL (8 hour TWA): 5 mg/m 3 (EH40, 1998)STEL (15 min): 10 mg/m 3 (EH40, 1998)

OES data for oil mist, mineral .In addition the Reciprocal Calculation Procedure (RCP) for hydrocarbons should be considered (EH40, 1998)

Engineering Controls: Ensure adequate ventilation of working area eg Local Exhaust Ventilation.

Personal Protection: Observe normal safety standards for handling chemicals. Avoid inhalation of vapour. Avoid contact with skin and eyes. Wear personal protective equipment appropriate for the task eg gloves, safety goggles, respirators (eg if ventilation is inadequate), appropriate overalls.

9. PHYSICAL& CHEMICALPROPERTIES

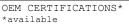
Test	Method	units	X 150	X 220	X 320	X 460
ISO Viscosity grade	ASTM D 2422	-	150	220		
					320	460
Density at + 15 °C	ISO 12185 / ASTM D4052	g/ml	0.847	0.85	0.854	0.856























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Kinematic viscosity							
@ 40°C	ISO 3104 / ASTM	mm²/s	146	218	325	459	
@ 100°C	D445	mm²/s	19	25.9		45	
					34.9		
Viscosity index	ISO 2909 / ASTM		148	151	152	153	
	2270						
Flash point, COC	ISO 2592 / ASTM D92	°C	>250				
Pour point	ISO 3016 / ASTM D97	°C	-39	-33	-33	-27	
Rust test							
Procedure A (24 hours Distilled water)			Pass	Pass	Pass	Pass	
Procedure B (24 hours synthetic sea water)	ISO 7210 / ASTM		Pass	Pass	Pass	Pass	
	D665						
Copper corrosion (3 hours @ 100°c	ISO 2160 / ASTM		1 a	1 a	1a	1 a	
	D130						
FE8 Wear test (81212MPB-75/80-80)							
Roller wear		mg	<10				
Cage wear	DIN 51819-3	mg	<10				
FZG test							
A/8. 3/90 scoring load stage			>12				
A/16. 6/90 scoring load stage	DIN 51354		12				
FZG micro pitting test	FVA NO.54		>10				
Foam sequence I	ISO 6247 / ASTM	ml	<100/10				
	D892						
Ageing behavior, increase of viscosity at							
100°c after 1000 h	ASTM 2893	%	2				
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10. STABILITY & REACTIVITY

Stability: N/A

Thermal Decomposition: Not determined

Conditions To Avoid: N/A
Material To Avoid: N/A

Hazardous Reactions: The product does not undergo hazardous polymerisation.

Hazardous Decomposition products: Oxides of carbon, aldehydes, ketones, and of hydrogen sulphide plus combustion products of nitrogen and sulphur.

11. TOXICOLOGICAL INFORMATION

Acute Toxicity No acute toxicological data are available.

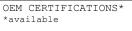
LD 50 rat (oral): N/A























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LD 50 rat (i.v.): N/A

Dermal Compatibility N/A

Mucous Membrane Compatibility: N/A

12. ECOLOGICAL INFORMATION

Ecotoxicology: Eco toxicological data are not available.

Further Ecological Information: N/A

Further Information: The product must not enter ground or waste water. If this occurs, inform the local

authority at once. Calcium content: approx. 0.229% by mass (atomic absorption)

13. DISPOSAL CONSIDERATIONS

Advice on Disposal: In accordance with national and local authority regulations, eg special waste or

incineration after consultation with the operators.

Contaminated Packaging: Treat emptied containers in the same way as the product, or if possible wash out

thoroughly and recycle.

14. TRANSPORT INFORMATION

IATA approved

Department of transportation Classification: Not hazardous by US DOT Regulations.

Dot Proper Shipping Name: Not Applicable

Other Requirements: Not Applicable

15. REGULATORY INFORMATION

Classification & Labelling: Product is not classified in accordance with the Chemical (Hazard Information and

Packaging for Supply Regulations (CHIP 97).

Risk Phrases :N/A

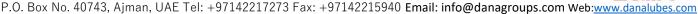
Safety Phrases: N/A

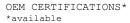
16. OTHER INFORMATION























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This information is based on our present state of knowledge and is intended to describe our products from the point of view of the safety requirements. It should not be construed as guaranteeing specific properties.

FOR DANA LUBRICANTS FACTORY LLC







