

PRODUCT NAME : GREASE - APIEZON AP101
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1. Product and Company Identification

Product Name: Apiezon AP101 Grease
Synonyms: None
Item Numbers : H023-01-044

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2. Composition/Information on Ingredients

Ingredient	% Weight	CAS No	Hazard class*	Risk phrase*
Refined mineral oil, thickening agent, polytetrafluoroethylene (PTFE)	Percentage composition not available	65154-53-4	Not applicable	Not applicable

*Hazard class & Risk phrase. These columns are only completed for ingredients which are classified as hazardous under EU Directive (67/548/EEC, as amended) and are present in sufficient concentration to make the overall substance hazardous. In all other situations, the column will be completed as "Not applicable".

3. Hazards Identification**EMERGENCY OVERVIEW**

This material when properly handled according to good working and hygienic practices is not dangerous to human health and the environment. Product begins to release irritating and toxic fumes above 290 °C/554 °F.

For short and long term exposure effects see Section 11 Toxicological data

Eye Effects: May cause transient irritation.
Skin Effects: Repeated and prolonged contact may cause skin disorders.
Ingestion Oral Effects: May cause nausea, vomiting and diarrhoea.
Inhalation Effects: Low volatility makes hazardous inhalation effects unlikely. The thermal decomposition vapours of fluorinated polymers may cause polymer fume fever with flu like symptoms in humans, especially when smoking contaminated tobacco.

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE: May aggravate pre-existing eye and skin disorders

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NFPA Hazard codes		HMIS Hazard codes		Rating System
Health	1	Health	1	0 = No Hazard
Flammability	1	Flammability	1	1 = Slight hazard
Instability	0	Reactivity	0	2 = Moderate Hazard
				3 = Serious Hazard
				4 = Severe hazard

4. First Aid Measures

- Eyes:** Irrigate with copious quantities of water.
- Skin:** Wash with soap and water.
- Ingestion/Oral:** Do not induce vomiting. Obtain medical attention.
- Inhalation:** None envisaged. If fumes produced at elevated temperatures are inhaled, remove to fresh air. If breathing problems occur, a qualified individual should administer oxygen or artificial respiration as indicated. Seek immediate medical attention.
- Other Information:** None.

5. Fire Fighting Measures

- Extinguishing Media:** Carbon dioxide, dry powder, foam or water fog. Do not use water jets.
- Fire and Explosion Hazard:** No unusual hazards known. May liberate toxic gases at >500°C/932°F. Fire may produce toxic fluorine compounds including hydrogen fluoride, phosgene and perfluoroolefins. Direct water stream may cause violent frothing.
- Special Protective Equipment for Fire Fighters:** In confined spaces, fire fighters should wear a self-contained breathing apparatus (SCBA) which meets appropriate standards operated in positive pressure mode and full turnout gear.

For Flammability Properties - see Section 9

6. Accidental Release Measures

Remove grease and clean area to prevent slip hazard. Place recovered grease in containers. Prevent product from entering drains, sewers and watercourses.

PRODUCT NAME : GREASE - APIEZON AP101**7. Handling and Storage**

Avoid handling at temperatures above 290 °C/554 °F without adequate ventilation. Do not carry cigarettes or cigars or smoke in areas where this product is being used or stored. Greasy hands may contaminate tobacco products. Smoking contaminated products may cause polymer fume fever. Wash thoroughly after handling and before meals and breaks.

8. Exposure Controls/Personal Protection**Exposure Limits**

Ingredient ¹	ACGIH - TLV -	OSHA - PEL	Occupational Exposure Limits EH40 (UK)
Refined mineral oil	5 mg/m ³ - 8 H TWA ² 10 mg/m ³ - STEL (as oil mist, mineral)	5 mg/m ³ - 8 H TWA (as oil mist, mineral)	5mg/m ³ - 8h TWA ³ 10mg/m ³ - STEL ³

¹ ACGIH recommends PTFE decomposition products be quantitatively determined in air as fluoride to provide an index of exposure. Although no TLV is recommended, ACGIH states "air concentration should be controlled as low as possible".

² As sampled by method that does not collect vapour.

³ Recommendation by the manufacturer for oil mists.

Personal Protection:

Engineering Measures:	None required under normal conditions of use.
Respiratory Protection:	None required under normal conditions of use.
Hand/Skin Protection:	Wear impervious gloves. Avoid prolonged exposure.
Eye/Face Protection:	Wear safety glasses.
Hygiene Measures:	Practice good workplace hygiene. Do not eat or smoke when handling. Wash hands after use and before eating.
Other/General Protection:	None.

9. Physical and Chemical Properties

Appearance and Odour	Brown semi solid. Faintly oily odour.	Boiling Point	Not applicable	°C/°F
pH (as supplied)	No data available	Melting Point	>200/392	°C/°F
Solubility in Water	Insoluble	Auto Ignition	No data available	°C/°F
Volatile Content by Volume	No data available	Flash Point	>250/482	°C/°F
Specific Gravity	0.981 @ 20°C/68°F			
Vapour Pressure (mbar)	<1 x 10 ⁻⁵ @ 20°C	Vapour Pressure (Torr)	<7.5 x 10 ⁻⁶ @ 68°F	

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10. Stability and Reactivity

Stability: Stable. Will not polymerise.
Material/Conditions to Avoid: Avoid strong oxidising agents. Avoid temperatures >200°C/392°F.
Hazardous Decomposition: Thermal decomposition will produce toxic fluorine compounds.

11. Toxicological Information

For a comprehensive description for the various toxicological (health) effects which may arise if the user comes into contact with the substance or preparation refer to Section 3 Hazards Identification.

Animal Data:

LD50 value: Oral: >2g/kg (rat)
Dermal: >2g/kg (rabbit)
LC50 value: No data available.

Carcinogenicity:

No known carcinogenic or mutagenic effects.

Toxicity information for PTFE decomposition products:

Inhalation: PTFE decomposition products vary widely in toxicity in experimental animals. Four hour LC50s (inhalation) for decomposition products range from 0.76 ppm (perfluoroisobutane) to 40,000 ppm (tetrafluoroethylene monomer). Workers exposed to PTFE fumes produced at 350-380°C (temperatures associated with liberation of hexafluoroethane, perfluoroisobutylene and octafluorocyclobutene) exhibited symptoms consistent with polymer fume fever at workplace air concentrations of 3.5 mg/m³ compounds containing fluorine.

Chronic: Repeated episodes of polymer fume fever may damage the lungs.

12. Ecological Information

When the product is used and/or disposed of as indicated, no adverse environmental effects are foreseen.

Mobility: the material is non volatile and insoluble in water.

Degradability: petrolatum base is slowly biodegradable in aerobic conditions; PTFE is biologically inert.

13. Disposal Considerations

The product and its packaging must be disposed of in accordance with local and national regulations. The product must not be incinerated due to liberation of toxic gases at >500°C/932°F.

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14. Transport Information

This product is not classified as dangerous under transport regulations.

PARAMETER	EUROPEAN	CANADIAN TDG	UNITED STATES DOT
Proper Shipping Name	Not applicable	Not applicable	Not applicable
Hazard Class	Not applicable	Not applicable	Not applicable
Identification Number	Not applicable	Not applicable	Not applicable
Shipping Label	Not applicable	Not applicable	Not applicable

15. Regulatory Information**European Regulatory Information**

This product has been classified in accordance with the Dangerous Substances Directive (67/548/EEC, as amended) and the Preparations Directive (88/379/EEC, as amended), implemented in the UK as the Chemical (Hazard Information and Packing) Regulations 1994 (CHIP, as amended).

Classified as dangerous to supply : No

Risk Phrases : Not applicable

Safety Phrases : Not applicable

Symbols : None

United States Regulatory Information

All materials contained in this product are on the U.S. Toxic Substances Control Act (TSCA).

SARA TITLE III - SECTION 313 SUPPLIER NOTIFICATION:

This product does not contain toxic chemicals subject to the reporting requirements of section 313 of the Emergency Planning and Community Right-to-Know Act (EPCRA) of 1986 and 40 CFR Part 372.

California Proposition 65: This product does not contain chemicals known to the State of California to cause cancer or reproductive toxicity.

Canadian Regulatory Information

WHMIS Classification: D2B.

All ingredients contained in this product are included on the Canadian DSL

16. Other Information

This MSDS is compiled in accordance with ANSI Z400.1 and the EU Safety Data Sheet Directive 91/155/EEC.

Sources of information for this data sheet:

- M & I Safety Data Sheet for Apiezon AP101 Grease. Issue date: October, 1998.
- Communications with M & I Materials.
- Edwards Publication 'Fluids and Sealants'. Publication number 09-H021-20-895.

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Glossary : **CAS**, Chemical Abstracts Service; **NFPA**, National Fire Protection Association; **HMIS**, Hazardous Material Information Service; **LD**, Lethal Dose; **LC**, Lethal Concentration; **ACGIH**, American Conference of Governmental Industrial Hygienists; **TLV**, threshold limit value; **OSHA**, Occupational Safety and Health Administration, US department of Labour; **PEL**, Permissible exposure limit; **EH40 (UK)**, HSE Guidance Note EH40 Occupational exposure limits; **PPM**, parts per million; **TWA**, Time-Weighted Average; **STEL**, Short Term Exposure Limit; **Canadian TDG**, Canadian Transportation of Dangerous Goods; **US DOT**, US Department of Transportation.

HSDB, Hazardous Substances Data Bank; **RTECS**, Registry of Toxic Effects of Chemical Substances; **CHEMID**, Chemical Identification; **DSL**, Domestic Substances List ; **TSCA**, Toxic Substances Control Act Public Law 94-469; **CERCLA**, Comprehensive Environmental Response, Compensation and Liability Act; **EPCRA**, Emergency Planning and Community Right-to-Know Act; **CAA**, Clean Air Act; US, **SARA (Title III)**, Superfund Amendments and Reauthorization Act.; **SARA 313**, Superfund Amendments and Reauthorization Act, Section 313; **EHS**, Extremely Hazardous Substance; **WHMIS**, Workplace Hazardous Materials Information System.

Revisions

Although the information and recommendations in this data sheet are to the best of our knowledge correct, it is recommended that you make your own determination of the material's suitability for your purpose before you use it. The information contained in this data sheet has been reproduced from the manufacturers data, the accuracy of this information is the responsibility of the manufacturer. BOC Edwards accept no responsibility for damage of any nature resulting from the use of, or the reliance upon this data sheet.