

MATERIAL SAFETY DATA SHEET

PRODUCT NAME : GREASE - FOMBLIN® AR555

1. Product and Company Identification

Product name: Fomblin AR555 grease
Synonyms: None
Item Numbers: H113-50-013, 000-007-696

European Contact Details

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Chemtrec: 1-800-424-9300

2. 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. Harmful effects are expected only when thermal decomposition produces irritating and toxic vapours.

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

Eye Effects: Repeated or prolonged contact with eyes may cause redness.

Skin Effects: Repeated or prolonged contact with skin may cause redness or dermatitis.

Ingestion/Oral Effects: Ingestion of the product may cause abdominal pain, nausea and vomiting.

Inhalation Effects: Low volatility makes inhalation an unlikely hazard. The thermal decomposition vapours of fluorinated polymers may cause polymer fume fever with flu like symptoms in humans, especially when smoking contaminated tobacco.

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

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

3. Composition/Information on Ingredients

Ingredient	% Weight	CAS No	Hazard class*	Risk phrase*
Base Oil : Fomblin Y (Perfluorinated polyether)	Not available	6991-67-9	Not applicable	Not applicable
Thickener : Algoflon (Polytetrafluoroethylene)	Not available	9002-84-0	Not applicable	Not applicable
Anti rust additive : Fomblin DA 305	Not available	178411-64-8	Not applicable	Not applicable

*Hazard class & Risk phrase. These columns are only completed for ingredients which are classified as hazardous under EU Directive No 1272/2008 (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".

4. First Aid Measures

Eyes:	Immediately flush the eyes with plenty of water for at least 15 minutes. If irritation occurs, seek medical attention.
Skin:	Wash with soap and water. If irritation occurs, seek medical attention.
Ingestion/Oral:	Give several glasses of water to drink. Do not induce vomiting. Seek medical attention if persistent pain arises.
Inhalation:	Move to fresh air in cases of accidental inhalation of vapours from decomposition products. If breathing problems occur, a qualified individual should administer oxygen or artificial respiration as indicated. Seek immediate medical attention.
Other Information:	None.

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5. Fire Fighting Measures

- Extinguishing Media: Water, foam, powder, chemicals, carbon dioxide.
- Fire and Explosion Hazard: Possible risk due to irritation and toxic affects of thermal combustion products. These can include hydrogen fluoride and carbonyl fluoride. Direct water stream may cause violent frothing.
- Special Protective Equipment for Fire Fighters: Fire fighters should wear a self-contained breathing apparatus (SCBA) which meets appropriate standards operated in positive pressure mode. Skin protection should be worn to protect from hydrogen fluoride vapour.

For Flammability Properties - see Section 9

6. Accidental Release Measures

In the event of spillage:

- Prevent contact of the spilled product with hot surfaces and flames.
- Wear personal protective clothing (see Section 8 Exposure Controls and Personal Protection).
- Recover released product by absorbing with earth, sand or sawdust and collecting in a suitable container. Wash area to prevent slip hazard.
- Avoid discharge into sewage systems, surface or underground waters and the soil.

7. Handling and Storage

- Handling: Wear protective clothing when required. Do not drink or eat during handling. Do not smoke in working areas. Avoid heating above the decomposition temperature of 290 °C/554 °F. Take precautions to avoid electrostatic charges which may be generated during handling.
- Storage: Keep away from heat sources, from flammable, combustible or explosive materials and from incompatible materials (see Section 10). Store in plastic, glass or lined metal containers.

8. Exposure Controls/Personal Protection

Exposure Limits:

Ingredient	ACGIH - TLV -	OSHA - PEL	Occupational Exposure Limits EH40 (UK)
Hydrofluoric Acid (HF) *	3 ppm (C)	3 ppm - 8H TWA	3 ppm - STEL
Carbonylfluoride (COF ₂) *	2 ppm - 8 H TWA 5 ppm (STEL)	Not available	Not available

* Note: Only the threshold limit values (ACGIH 1998/99), OSHA PELs, and UK OELs of by-products from thermal decomposition are available.

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Personal Protection:

Engineering Measures:	Provide working areas with adequate ventilation systems. Provide eye wash and emergency shower facilities.
Respiratory Protection:	Wear self-contained breathing apparatus in cases of thermal decomposition or fire. See also Section 5.
Hand/Skin Protection:	Wear rubber gloves and worksuit or rubber apron.
Eye/Face Protection:	Wear safety goggles.
Hygiene Measures:	Practice good workplace hygiene. Do not eat or smoke when handling. Wash hands before eating.
Other/General Protection:	None.

9. Physical and Chemical Properties

Appearance and Odour	White, odourless grease	Boiling point	Not applicable	°C/°F
pH (as supplied)	No data available	Freezing Point	No data available	°C/°F
Solubility in Water	Insoluble	Auto Ignition	Not flammable	°C/°F
Volatile Content by Volume	No data available	Flash Point	Not explosive	°C/°F
Specific Gravity	1.9			
Vapour Pressure (mbar)	$< 1.3 \times 10^{-5}$ @ 20 °C	Vapour Pressure (Torr)	$< 1 \times 10^{-6}$ @ 68 °F	

10. Stability and Reactivity

Stability:	Stable under normal conditions of use and storage.
Material/Conditions to Avoid:	Avoid exposing the product to free flames or temperatures above 290 °C/554 °F. Avoid contact with strong alkaline non-aqueous compounds, Lewis acids (AlCl ₃ , SbF ₅ , CoF ₃) above 100 °C/212 °F and fine powdered magnesium or aluminium or their alloys above 200 °C/392 °F.
Hazardous Decomposition:	The product may decompose at temperatures above 290 °C/554 °F with emissions of hydrogen fluoride (HF) and carbonyl fluoride (COF ₂), which are toxic and corrosive gases.
Hazardous Polymerisation:	Will not occur.

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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 2 Hazards Identification.

Animal data:

LD50 value: Fomblin Y - Oral: >2000 mg/kg (rat), Dermal: > 2000 mg/kg (rat)
Fomblin DA305 - Oral: >5000 mg/kg (rat)

LC50 value: No data available.

Carcinogenicity:

The product has no known effects in relation to carcinogenesis, mutagenesis and reprotoxicity.

12. Ecological Information

There is no data available for the environmental effects (mobility, persistence/degradability, bioaccumulation) or the ecostability of the product.

Ecotoxicity: LC50 (rainbow trout), EC50 (daphnia) and EC50 (bacteria) > maximum solubility of the product in water.

13. Disposal Considerations

If recycling is not practicable, dispose of the product and used containers in accordance with all local and national requirements.

Waste product can be incinerated at a licensed disposal plant equipped to burn fluorine compounds. Waste containers can be reused after thorough washing, or be sent to landfill sites.

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

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15. Regulatory Information

European Regulatory Information

This product has been classified in accordance with EU Regulation No 1272/2008 (as amended) on the Classification, Labelling and Packaging of Substances and Mixtures.

Classified as dangerous to supply: No.

Risk Phrases: Not applicable.

Safety Phrases: Not applicable.

Symbols: None.

United States Regulatory Information

SARA TITLE III SECTION 313 SUPPLIER INFORMATION:

Base oil and thickeners are not 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: Base oil and thickener are not listed as chemicals known to the State of California to cause cancer, birth defects or other reproductive harm.

OSHA Regulatory Status: This material is not classified as hazardous under OSHA regulations.

Canadian Regulatory Information

WHMIS Classification: D2B

16. Other Information

This MSDS is compiled in accordance with ANSI Z400.1 and Regulation (EC) No 1907/2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH).

Sources of information for this data sheet:

- Solvay Solexis "FOMBLIN® GREASE AR555" Safety Data Sheet. Ref: fom0232e. Updating: 23/6/2006.

Glossary:

ACGIH - American Conference of Governmental Industrial Hygienists; **ANSI** - American National Standards Institute; **Canadian TDG** - Canadian Transportation of Dangerous Goods; **CAS** - Chemical Abstracts Service; **Chemtrec** - Chemical Transportation Emergency Center (US); **CHIP** - Chemical (Hazard Information and Packing); **DSL** - Domestic Substances List; **EC** - Equivalent Concentration; **EH40 (UK)** - HSE Guidance Note EH40 Occupational exposure limits; **EPCRA** - Emergency Planning and Community Right-to-Know Act; **HMIS** - Hazardous Material Information Service; **LC** - Lethal Concentration; **LD** - Lethal Dose; **NFPA** - National Fire Protection Association; **OEL** - Occupational Exposure Limit; **OSHA** - Occupational Safety and Health Administration, US department of Labour; **PEL** - Permissible Exposure Limit; **SARA (Title III)** - Superfund Amendments and Reauthorization Act; **SARA 313** - Superfund Amendments and Reauthorization Act, Section 313; **SCBA** - Self-Contained Breathing Apparatus; **STEL** - Short Term Exposure Limit; **TLV** - threshold limit value; **TSCA** - Toxic Substances Control Act Public Law 94-469; **TWA** - Time-Weighted Average; **US DOT** - US Department of Transportation; **WHMIS** - Workplace Hazardous Materials Information System.



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Revisions:

April 2010 - Data Sheet updated to reflect the latest supplier safety information.

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