



our **power**, your **passion**

SAFETY DATA SHEET

According to EC Regulation 1907/2006 and seq. amendments (Regulation n.453/2010)

1 - IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND COMPANY

1.1 Identification of the substance/mixture

Substance / Mixture	EFCO GRASSO MOS2
Synonyms	
CAS Number	n.a.
CE Number	n.a.
INDEX Number	n.a.
Num. Registr. REACH	n.a.
Chemical Formula	n.a.
Molecular Weight	n.a.

1.2 Use of substance / preparation

Common use:	Multipurpose lubricant grease
Identified uses of the chemical safety report	

1.3 Company Identification

Supplier	EMAK S.p.A. Via Fermi 4 42011 BAGNOLO IN PIANO (RE) - ITALY
Telephone:	+39 0522 956611 (OFFICE-DESK)
Fax:	+39 0522 951555
E-mail address:	schedesicurezza@emakgroup.net

1.4 Emergency telephone number: +039 0522 956611 (OFFICE-DESK) - From 8.30 to 12.30 and from 14.00 to 18.00

2 - HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture

Hazards No specific hazard under normal conditions. The product does not present risks under normal operating conditions.

Classification according to Directive 67/548 / EEC O 1999/45 / EC: NOT CLASSIFIED
Classification according to Regulation (EC) n. 1272/2008 (EU-GHS / CLP): NOT CLASSIFIED

2.2 Elements of label

Pictogram	None
Risk Phrases	none
Safety Advice	none
Note	

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Other Information

no data

2.3 Other hazards

Chemical and physical hazards: If involved in a fire, the product may be subject to combustion. Thermal decomposition can give rise to compounds of unburned hydrocarbons and other potentially hazardous fumes and vapors.

Health hazard: prolonged contact may cause irritation to eyes and skin. If swallowed, can cause irritation of the stomach and intestines.

Environmental hazard: dispersion in the environment can cause adverse impact, particularly on aquatic organisms.

3 - COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substance**Substance composition** n.a.**3.2 Mixture****Mixture Composition**

Paraffinic mineral oil thickened with lithium soap, molybdenum disulfide.

Mineral base oils used have a value of DMSO-extract as determined by method IP 346/92 less than 3%. They are therefore not classified as carcinogens according to EU Directive 94/69/EC note L (introduced for the first time with the 21° adaptation to technical progress from Directive 67/548).

Main components:

Component	%	CAS	EC	REACH Registration number	Index	Classification according to Directive 67/548 / EEC or 1999/45 / EC	Classification according to Regulation (EC) n. 1272/2008 (EU-GHS / CLP)
Lubricating oils (petroleum), C24-50, solvent-extd., dewaxed, hydrogenated	80,0	101316-72-7	309-877-7	01-2119489969-06-XXXX	649-530-00-X	not classified (Note H-L)	not classified
Lithium 12-hydroxystearate	8,3	7620-77-1	231-536-5	01-2119970893-23-XXXX	-	not classified	not classified

The mixture does not contain other hazardous substances in concentrations that require mention (Regulation (EC) 1907/2006 as amended).

The full text of notes and phrases is specified in section 16.

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4 - FIRST AID

4.1 Description of first aid measure

Eye contact:

- Wash eyes immediately with plenty of water for several minutes while holding eyelids open.

Contact with skin:

- Remove contaminated clothing and wash thoroughly with soap and water.

General note: any substance, in case of accidents involving pressurized pipes and similar may be accidentally injected under the skin, even without external damage. In this case it is necessary to conduct the injured to hospital as soon as possible for treatment. Do not wait for symptoms to develop.

Inhalation:

- In case of exposure to high concentrations of vapors and mists remove the subject from the contaminated transporting him in a well ventilated place.
- If breathing is difficult, give oxygen if possible, or use assisted ventilation (no mouth to mouth resuscitation). Seek medical attention if necessary.

Ingestion:

Do not induce vomiting to avoid the risk of aspiration into the respiratory tract. Immediately transported the casualty to the emergency department.

4.2 Major symptoms and effects, both acute and delayed

The product, to the best of our knowledge, is not harmful.

No risk under normal conditions of use.

It can be irritating for frequent and prolonged exposure.

4.3 Statement of the need to consult a doctor immediately or special treatments

Consult a doctor immediately after contact with eyes, skin persistent irritation and after ingestion. If breathing is irregular seek medical advice. Induce vomiting only if indicated by physician.

5 - FIREFIGHTING MEASURES

5.1 Extinguishing Media

Suitable extinguishing media: use extinguishing Class B: carbon dioxide (CO₂), foam, sand, earth, water spray, dry chemical powder, unless otherwise stated.

Unsuitable extinguishing media: full water jets. Use water jets only to cool the surfaces of the containers exposed to fire, unless otherwise stated.

NOTE:

Cool containers exposed but not involved to fire with water, to prevent the possible explosion and spread of fire.

5.2 Special hazards arising from the substance or mixture

The equipment used under pressure can lead to the formation of aerosols that could, under appropriate conditions of ignition, catch fire. Avoid breathing fumes from burning because it can form compounds of unburned hydrocarbons such as carbon monoxide, unburned hydrocarbons and polycyclic aromatic derivatives with other derivatives potentially dangerous such as chlorine, sulfur and nitrogen.

5.3 Advice for fire-fighters

Equipment: wear equipment complete of helmet with visor and neck protection, self contained breathing apparatus at pressure or demand, insulative jacket and trousers, with bands around arms, legs and life.

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6 - ACCIDENTAL RELEASE MEASURES

- 6.1 Personal precautions, protective equipment and emergency procedures** Keep non-involved personnel away from the area of spillage.
Ventilate area.
Avoid formation of aerosols and vapors from pressurized equipment.
Eliminate sources of ignition.
Avoid contact with skin, eyes by wearing appropriate protective clothing.
Ensure the availability of equipment for cooling the vessels, to prevent the danger of overheating in the event of a fire nearby.
The losses to the floor causing a risk of sliding.
- Respiratory protection:** in the possibility of exposure to oil mist in the relatively high concentration, use masks with filters specific for organic vapors and aerosols (EN 140 and 143).
- Eye protection:** Wear safety goggles (EN 166).
- Skin protection:** Use rubber or PVC gloves (EN 374). Wear work clothing (EN 465, 466, 467). It may be useful to use barrier cream.
- 6.2 Environmental precautions** Prevent product from entering sewers, rivers or other bodies of water. If required, notify relevant authorities according to all applicable regulations.
- 6.3 Methods and material for containment and cleaning up** Contain spills of small quantities of product with earth, sand or other inert absorbent material (vermiculite, sepiolite). Contain spill of large quantities of product. Transfer into suitable impermeable containers for storage and transport of collected material. Dispose according to local regulations.
- 6.4 Reference to other sections** See also sections 8 (protective equipment), 12 (ecology), and 13 (disposal).

7 - HANDLING AND STORAGE

- 7.1 Precautions for safe handling** Use of personal protective equipment must be consistent with good occupational hygiene practices.
Avoid direct contact with the product.
Avoid breathing vapors or aerosols.
Ensure adequate ventilation of the working environment, especially if confined.
Do not reuse contaminated clothing.
Do not eat, drink or smoke when using this product.
Do not use open flames, sparks or avoid contact with possible sources of ignition.
Wash hands thoroughly with soap and water before meals and after work shift.
- 7.2 Conditions for safe storage including any incompatibilities** The product is stable under normal conditions of use and storage.
Keep product in original container, stored in places and conditions which will ensure the control and containment of losses.
Keep containers tightly closed.
Store in a cool place, away from sources of heat or ignition, away from direct sunlight and do not constantly keep at temperatures above 50° C.
Ensure adequate ventilation during storage and use.
Avoid accumulation of electrostatic charges.

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7.3 Specific end use(s)

For recommendations on the specific end-uses are not currently required supplementary information.

Specific use: Before using the product for purposes other than those provided, refer to the relevant legislation and technical standards, take the appropriate measures of good operational practice.

8 - EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control Parameter

Control parameter

Exposure limit values (components of the mixture):

- TLV TWA: 5 mg/m³ (mineral oil, pure, highly refined and otherwise)
- TLV STEL: n.a

Monitoring procedures: Refer to Dir. 96/82/EC.

8.2 Exposure Controls

8.2.1 Appropriate engineering controls

No special requirements under normal conditions of use. Refer to the standards of good operating practices, and environmental hygiene.

Avoid the generation of mists and aerosols and their spread through screening (if appropriate) of the machines, and through the use of ventilation / local exhaust.

Organize activities with equipment suitable for the purpose. Use of adequately trained staff, informed and trained in operating procedures.

8.2.2 Personal protection measures, such as personal protective equipment

a) Eye / Face Protection

Wear protective goggles where it is possible to come in contact with the product (EN 166).

b) Skin Protection

Use rubber gloves or synthetic (neoprene, nitrile ...) preferably felt-lined, resistant to mineral oils or solvents (EN 374).

The choice of protective gloves depends on the condition of use and must take into account the manufacturer's instructions.

Gloves should be replaced at the first signs of deterioration. Wear gloves after proper hand washing.

In case of contact not extended, the use of barrier creams can be a useful security tool.

Use overalls and aprons made of appropriate material, immediately change contaminated clothing and wash before reuse (EN 465, 466, 467).

c) Respiratory Protection

Not required under normal conditions of use.

In the possibility of exposure to oil mist in the relatively high concentration, use masks with filters specific for organic vapors and aerosols (EN 140 and 143).

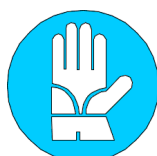
d) Heat Dangers

Heat is not dangerous under normal conditions of use.

8.2.3 Environmental Exposure Controls

Take all necessary technical precautions to prevent the spread of the product in the environment. Operate only in the equipped area, provided with containment systems and resources for emergency response (see section 6). Refer to local regulations relating to air, soil and water pollution.

Figure: DPI



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9 - PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

a) Appearance	Physical state at 20° C: Semisolid, smooth, homogeneous. Color: Black	
b) Odour	Typical	
c) Olfactory threshold	not applicable	
d) pH	not applicable	
e) Melting / Freezing Point °C	-	Note > 180°C - Dropping point (ASTM D 566)
f) Initial boiling point and boiling range °C	-	Note not available
g) Flash point °C	-	Note > 230°C - (ASTM D 93) Referred to the base oil
h) Evaporation rate	not applicable	
i) Flammability solid / gas °C	-	Note not available
j) Upper / Lower Flammable or Explosive	not available	
k) Vapour pressure	not applicable	
l) Vapor density	not applicable	
m) Relative density	0.900 kg/L @ 15°C (ASTM 1298)	
n) The Solubility / solubility of the	Insoluble in water.	
o) Partition Coefficient n-octanol/water	not available	
p) Auto-ignition temperature °C	not available	
q) Decomposition temperature °C	not available	
r) Viscosity	not available	
s) Explosive properties	not available	
t) Oxidising properties	not available	
9.2 Other information	not available	
Conductivity	not available	
Gas Group	not applicable	
Other information	Consistency: Penetration (ASTM D 217): NLGI class 2	

10 - STABILITY AND REACTIVITY

10.1 Reactivity	The substance does not present additional dangers of reactivity than those reported in the next subtitle.
10.2 Chemical Stability	Stable under recommended storage conditions.
10.3 Possibility of hazardous reactions	No dangerous reactions known.
10.4 Conditions to avoid	No decomposition if used according to specifications.

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- 10.5 Incompatible materials** Avoid contact with strong oxidizing agents.
- 10.6 Hazardous Decomposition Products** None under normal conditions of use. See also Section 5.

11- TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

Symptomatology

There are no experimental data on the product. At the present state of our knowledge, is not harmful. It should be noted, therefore, the concentration of each substance in order to assess the toxicological effects from exposure to the product.

The health risks shown, created from the current knowledge on the toxicity of mineral base oils and additives used in relation to the concentration in the finished product that involves the classification.

Studies on the separate components showed no consistent evidence of toxicity at the concentrations present in the mixture, so there is no classification assigned from regulation on hazardous substances.

CLASS OF RELEVANT RISK FOR SUBSTANCE

a) Acute toxicity:	DL 50 Oral (mg/Kg)	-	Note
	DL 50 Skin (mg/Kg)	-	Note
	CL 50 Inhalation (mg/l/4h)	-	Note

Other toxicity values

Acute toxicity data related to the registration dossier of the most abundant component of the mixture (Lubricating oils (petroleum), C24-50, solvent-extd., dewaxed, hydrogenated):

Strain	Route of Exposure	Dose	Reference
Rat Sprague-Dawley	oral	DL ₅₀ >5000 mg/kg bw	Test OECD 401/420 Registration Dossier
Rat Sprague-Dawley	inhalation	CL ₅₀ >5,53 mg/L air	Test OECD 403 Registration Dossier
Rabbit New Zeland White	dermal	DL ₅₀ >5000 mg/kg bw	Test OECD 402 Registration Dossier

b) Irritation

Data on irritation, related to the registration dossier of the most abundant component of the mixture (Lubricating oils (petroleum), C24-50, solvent-extd., dewaxed, hydrogenated):

Strain	Route of Exposure	Effect	Reference
Rabbit New Zeland White	dermal	NOT irritating	Registration Dossier
Rabbit New Zeland White	ocular	NOT irritating	Test OECD 405 Registration Dossier

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Inhalation

- Prolonged exposure to vapors or mists of product may cause irritation to the respiratory tract.

Ingestion

- Not harmful if accidentally swallowed in small doses. Ingestion of large quantities of product can cause irritation of the digestive tract with vomiting, nausea or diarrhea.

Skin contact

- The repeated and prolonged contact may cause irritation with potential dermatitis.

Eye contact

- Direct contact may cause temporary discomfort with mild irritation.

General warning

The high-pressure injection of product into the skin may lead to local necrosis if the product is not surgically removed.

c) Corrosivity

Not reported evidence concerning this effect.

d) Sensitization

Data on sensitization in the registration dossier related to the most abundant component of the mixture (Lubricating oils (petroleum), C24-50, solvent-extd., dewaxed, hydrogenated):

Strain	Route of Exposure	Effect	Reference
Guinea pig Hartley	maximisation Test /intradermal and epicutaneous	NOT sensitizing	Test OECD 406 Registration Dossier

To date, there are no reported cases of skin sensitization resulting from the use of the product.

e) Repeated dose toxicity

Repeated dose toxicity data related to the registration dossier of the most abundant component of the mixture (Lubricating oils (petroleum), C24-50, solvent-extd., dewaxed, hydrogenated):

Strain	Route of Exposure	NOEL	Reference
Rabbit New Zeland White	dermal	1000 mg/kg bw/day (male) 1000 mg/kg bw/day (female)	Test OECD 410 Registration Dossier
Rat Sprague-Dawley	dermal	≥ 2000 mg/kg bw/day	Test OECD 411 Registration Dossier

There are no significant data of repeated dose toxicity resulting from the use of the product.

f) Carcinogenicity

Carcinogenicity data related to registration dossier of the most abundant component of the mixture (Lubricating oils (petroleum), C24-50, solvent-extd., dewaxed, hydrogenated):

Strain	Effect	Reference
mouse female CF1	NOT carcinogenic	Test OECD 451 Registration Dossier

There are no significant data on carcinogenic effects resulting from the use of the product.

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g) mutagenicity

Mutagenicity data related to registration dossier of the most abundant component of the mixture (Lubricating oils (petroleum), C24-50, solvent-extd., dewaxed, hydrogenated):

Strain	Effect	Reference
Chinese hamster Ovary cells	NOT mutagenic	Test OECD 473 Registration Dossier
S. typhimurium TA 98	NOT mutagenic	Test OECD 471 Registration Dossier

There are no significant data on mutagenic effects resulting from the use of the product.

h) Reproductive toxicity

Reproductive toxicity data related to registration dossier of the most abundant component of the mixture (Lubricating oils (petroleum), C24-50, solvent-extd., dewaxed, hydrogenated):

Strain	Effect	Reference
Rat CD BR Sprague-Dawley	No effects on reproduction and development	Test OECD 421 Registration Dossier
Rat Sprague-Dawley	No effects on reproduction and development	Test OECD 414 Registration Dossier

There are no significant data on reproductive toxicity resulting from the use of the product.

Other information

Not available

12 - ECOLOGICAL INFORMATION

Ecological Information

The product is not classified as dangerous for the environment.

Avoid dispersion in the environment.

Use according to good manufacturing practices, avoid dispersion into the environment.

Notify relevant authorities according to all applicable regulations if the product can reach waterways or sewers or contaminate soil or vegetation.

Studies on the separate components showed no consistent evidence of toxicity at the concentrations present in the mixture, so there is no classification assigned required by the regulations on hazardous substances.

This product may cause significant adverse impact, even on the activated sludge biological treatment plants.

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12.1 Toxicity

Toxicity data related to registration dossier in the most abundant component of the mixture (Lubricating oils (petroleum), C24-50, solvent-extd., dewaxed, hydrogenated):

Endpoint	Result	Reference
Toxicity to fish Pimephales promelas	LL ₅₀ ≥ 100 mg/L WAF 96 h	Test OECD 203 Registration Dossier
Toxicity to invertebrate Daphnia magna	EL ₅₀ > 10000 mg/L WAF 48 h	Test OECD 202 Registration Dossier
Toxicity to algae and cyanobacteria	EL ₅₀ ≥ 100 mg/L WAF 72 h	Test OECD 201 Registration Dossier
Toxicity to microorganisms	NOEL > 1,93 mg/L	Registration Dossier

12.2 Persistence and degradability

Data referred to the registration dossier of the most abundant component of the mixture (Lubricating oils (petroleum), C24-50, solvent-extd., dewaxed, hydrogenated):

Endpoint	Result	Reference
Ready biodegradability in water	Inherently biodegradable *	Test OECD 301 F Registration Dossier

* The finished product, given the consistency and low water solubility, it is believed to be not readily biodegradable.

12.3 Bioaccumulative potential

May occur in aquatic sediments and in sewage treatment plants for biological.

12.4 Mobility in soil

- The product floats on water.
- The product is absorbed from the soil surface.
- The product is conveyed from the water surface, while it is absorbed and retained by the soil.

12.5 Results of PBT assessment

No data available

Ecological Information

No data available

13 - DISPOSAL CONSIDERATIONS

13.1 Methods of waste treatment Prevent environmental discharge. Dispose of waste or used sacks/containers according to local regulations.

14 - TRANSPORT INFORMATION

The substance itself is not considered dangerous within the meaning of the regulations governing the transport of dangerous goods by road (ADR), rail (RID), sea (IMDG Code) and by air (IATA)

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15 - REGULATORY INFORMATION

15.1 Standards and legislation on health, safety and environmental specifications for the substance or mixture

Restrictions on the use under Title VII of the REACH Regulation (EC Regulation 1907/2006 and s.a.) not subject to such restriction

Authorization under REACH (Regulation EC 1907/2006 and subsequent amendments): not subject to such restriction

Other EU directives

Seveso Directive (Dir 96/82/EC and Dir 105/2003/CE): not subject to such restriction

Chemical Agents Directive (Dir.98/24/CE): mixture is not hazardous

Carcinogens Directive and / or mutagens (Dir 97/42/EC and 99/38/EC): mixture is not carcinogenic/mutagenic

Note: no data

15.2 Chemical Safety Assessment

Chemical Safety Assessment was not carried out

16 - OTHER INFORMATION

List of relevant phrases

List of R phrases, indications of danger, relevant:

-

List of H phrases, indications of danger, relevant:

-

Note H: The classification and labelling shown for this substance applies to the hazardous property(ies) indicated by the hazard statement(s) in combination with the hazard class(es) and category(ies) shown. The requirements of Article 4 for manufacturers, importers or downstream users of this substance apply to all other hazard classes and categories. For hazard classes where the route of exposure or the nature of the effects leads to a differentiation of the classification of the hazard class, the manufacturer, importer or downstream user is required to consider the routes of exposure or the nature of the effects not already considered. The final label shall follow the requirements of Article 17 and of section 1.2 of Annex I. The classification and label shown for this substance applies to the dangerous property(ies) indicated by the risk phrase(s) in combination with the category(ies) of danger shown. Manufacturers, importers and downstream users of this substance shall be obliged to carry out an investigation to make themselves aware of the relevant and accessible data which exists for all other properties to classify and label the substance. The final label shall follow the requirements of section 7 of Annex VI to Directive 67/548/EEC.

Note L: The classification as a carcinogen need not apply if it can be shown that the substance contains less than 3% DMSO extract as measured by IP 346 "Determination of polycyclic aromatics in unused lubricating base oils and asphaltene free petroleum fractions — Dimethyl sulphoxide extraction refractive index method", Institute of Petroleum, London. This note applies only to certain complex oil-derived substances in Part 3.

Guidelines for the formation

Workers potentially exposed to this substance must be trained adequately on the basis of the contents of this MSDS.

More information

Do not use the product for purposes other than those specified. In this case the user may be subject to risks that are not estimated.



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Bibliography	EINECS
Additional Bibliography	Internal MSDS. MSDS of raw materials supplied. This information has been compiled following the guidelines for the preparation of Safety Data Sheet prepared by the Group for lubricating industrial lubrication (Gail).
Update Reason	Update according to Annex I of EU Regulation 453/2010 which amended Annex II of EC Regulation. 1907/2006. This MSDS cancels and replaces those issued in previous date.
Departments	
Msds Code	
Created on	24/06/2014
Update	24/06/2014
Update Num.	2
** n.a. = Not Applicable n.c. = Not Communicated	

The various signs (such as *, **) indicate the sections shown notes on specific classification information or differences from the conversion from the DIR reg CLP (see Part I of the All.VI Reg 1272/2008).

Information contained herein is based on our current knowledge on health, safety and environment, and is intended to allow the user of the product - under whose control it is the use - to identify the preventive and protective behaviors useful in order to a safe operation. Their character, however, is informational and does not constitute a warranty. The user of the product must ensure if it is necessary get more information before use other from those referred. The user must always respect the relevant rules of law and good operating practice. We accept no responsibility in this regard for any unauthorized use of the product.



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