

SAFETY DATA SHEET (HDS)
MOLYGRAFIT GBIO-2/M/SEP

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Validity date: January 2012 – January 2016**Section 1: Mixture identification and supplier**

Name of the mixture MOLYGRAFIT GBIO-2/M/SEP
Supplier / producer / marketer MOLYGRAFIT INDÚSTRIA E COMÉRCIO LTDA.
Product use Semi fluid grease which contains molybdenum bisulphide and anticorrosive, indicated for the use in pins, bearings, "mancales", gears, etc.
Molygrafit GBIO -2/M/SEP. Is specially formulated with additives under extreme pressure and it is indicated for equipment which undergo high loads and extreme temperatures.
Molygrafit GBIO 2/M/SEP. It is a biodegradable lubricant in accordance to the norm OECD 301 B
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Section 2: Mixture information**Mixture case****Chemical components:****a) Main mixture components**

Chemical name	
Additive	
Vegetable oil	90 %
Thickener	3 %
Molybdenum bisulphide	2 %
Additives	5 %

b) Risk components

Chemical name
Molybdenum bisulphide

c) UN number

Chemical name	
Molybdenum bisulphide	It is not considered a dangerous substance by the United Nations

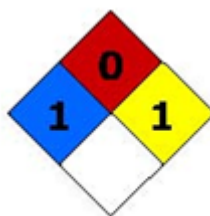
d) CAS number

Chemical name	CAS number
Additives	Not defined
Vegetable oil	66071-03-2
Thickener	7931-89-9
Molybdenum bisulphide	1317-33-5

Section 3: Risk identification

Mixture risk classification:

Rombo NCh 1411/IV



NFPA 704



a) Health risk to people

Effects of an acute over exposure (one time only)

Inhalation

Nontoxic product.

Nontoxic product. It could cause bronchial spasms.

Skin contact

Slight skin irritation.

When in contact with eyes

Minor eyes irritation.

Ingestion

Only when the product is ingested in large quantities more than 500 grams, it can cause adverse effects to the health of people as vomit and diarrhea. It can cause hepatic copper depression.

Effects due to a chronic over exposure (long term)

There is not evidence that the product can cause chronic effects

Medical conditions which will be

Given the quantity in the container one does not expect medical conditions which could become aggravated due to products exposure.

aggravated due to products exposures

b) Environment risks

Isolated from water supply, in recommended working conditions it does not contaminated, it is biodegradable (OECD 301 B)

c) Chemical and physical nature risks

Avoid contact with oxidants, acids and strong bases.

d) Specific Risks

Only in the case of ingestion of large quantity of the product, more than 500 grams, it can cause adverse effects to people's health such as vomit and diarrhea. It can cause hepatic copper depression.

Section 4: First aid measures

IN CASE OF ACCIDENTAL CONTACT WITH THE PRODUCT, PROCEED ACCORDING TO:

Inhalation	Only in the case of massive exposure to the product by breathing, transfer the injured person to a non-contaminated area in order to breathe fresh air.
When in contact with skin	Wash with water and neutral soap, remove contaminated clothes. If irritation occurs get medical assistance. Wash clothes before using again.
When in contact with eyes	Wash immediately with plenty of water keeping eyes opened for at least 15 minutes. GET IMMEDIATE MEDICAL ASSISTANCE.
Ingestion	IN CASE OF LARGE INGESTION OF THE PRODUCT, MORE THAN 500 GRAMS, DO NOT PROVOKE VOMITING. DO NOT GIVE LIQUIDS TO THE VICTIM IF IT IS INCONCIOUS OF VERY SLEEPY. MAKE THE VICTIM DO MOUTH WASHES WITH 2 SIPS OF WATER TO ELIMINATED TASTE IN THE MOUTH, IS THE VICTIM VOMITS SUDDENLY, KEEP HEAD BELOW THE HIPS TO AVOID ASPIRATION. IF RECOVERY DOES NOT HAPPEN SOON, SEEK MEDICAL ASSISTANCE.
Notes for treating doctor	In case of an ingestion of large quantities of the product, more than 500 grams, carry out gastric wash and the controlled volume and medical supervision. Product nontoxic, based on ester.

Section 5: Measures to be taken in case of fire

Specific risks to be taken into account to control the fire	Avoid heat and ignition sources. Water must only be used for cooling down.
Extinction agents	Chemical foam, carbon dioxide.
Specific procedures to combat fire	Wherever possible, keep wind to your back. Combat fire the farthest away from it possible. Could down the containers exposed to the fire.
Personal safety protection equipment for dealing with fire	Use protective breathing equipment with cylinders and full mask. Helmet with visor when reflects heat. Safety boots.
Dangerous chemical realized during combustion	CO ₂ , and if there is uncomplete combustion CO. Carbon monoxide is highly toxic when it is inhaled, carbon dioxide in sufficient concentration can be suffocate.

Section 6: Measures for controlling spills or leaks

Emergency measures in case of spill	Contain using inert absorbent material, so it does not reach the flow of sewage water or underground. Evacuate the area if necessary.
Personal safety equipment to handle the emergency	Use PPE for lubricant (gloves, glasses, apron).
Personal precautions	Do not walk over spill material.
Precautions to be taken in order to avoid danger to the environment	Isolate from water ways
Cleaning methods (Recovery-Neutralization)	In case of spills, recover the inert absorbent material.
Methods for waste disposal	The waste can be eliminated by incineration in installation specially designed for this purpose according to current norms. Do not dispose in domestic waste.
Risk prevention secondary notes	Most of the vaporous are heavier than air. These will disperse through the ground, and will accumulate in low areas (sewage, cellars).

Section 7: Handling and Storage

7.1 HANDLING

Technical measures (recommendations)	Isolate from high oxidants.
Precautions to be taken	Store in well ventilated areas.
Recommendation on specific safe handling	Use PPE for lubricants (gloves, glasses and apron)

7.2 STORAGE

Technical measures	In dry and ventilated areas, away from ignition and high oxidant sources.
Storage conditions	Keep containers closed after use.
Recommended packing and non-adequate for the supplier	The containers must be metallic or plastic.

Section 8: Exposure control / Personal protection

Measures to reduce the possibility of exposure	Use from the containers only the quantity that it is required in the process. Store in opened areas or with natural or forced ventilation.
Control parameters	Information not available
Working exposure limits	OSHA: Molybdenum insoluble compounds Permissible exposure limit: 8 hours weighted average: 15 mg/m3
Odoriferous threshold	Information not available
Biological standards	Biodegradable product according to the method OECD 301 B.

Permissible radioactive limits	Not applicable, it is not radioactive.
Breathing protection	Not applicable, it is not a volatile product
Eyes and face protection	Safety classes
Skin and body protection	Gloves compatible with lubricants
Feet protection	Safety shoes or boots compatible with lubricants
Other safety protection equipment	Not required
Hygiene and ventilation measures	The ventilation must be natural or forced in.

Section 9: Physical and Chemical properties

Physical and Chemical properties	MOLYGRAFIT GBIO-2/M/SEP
Physical state	Pasty
Form in which present itself	Non available
Color	Black
Odor	Characteristic
PH	Non available.
Specific temperatures and/or intervals	Non available.
Decomposition temperature	> 300 ° C.
Inflammability point	Non available.
Inflammation point	Non available.
Self-Ignition temperature	Non available.
Inflammability limit	Non applicable
Steam pressure	Non available.
Steam density	Non available.
Density	0,95 g/cm3 a 20 ° C.
Solubility solvent	Soluble cetonas.
Octane partition coefficient /water	Non available.
Corrosively	Non available.
Volatility index	Non available.
Radioactivity	Non applicable.
Flame propagation velocity	Non available.
Combustion temperature	Non available.
Volatiles per volume	Non available.
Viscosity	Non available.

Section 10: Stability and Reactivity

Stability	Stable during use under normal conditions. It reacts with high oxidizing agents. It can be oxidized to acids and reduced to the corresponding alcohol (IPA, Isopropanol).
Condition which must be avoid	Heat, flames and sparks, accumulation of vaporous.
Incompatibility (materials which must be avoid)	Avoid mixing with materials highly oxidants. It can lead to producing highly explosive mixtures by mixing with them.
Dangerous products of decomposition	It decomposes emitting smokes, acres and irritants.
Dangerous products of combustion	Smokes, acres and irritants.
Dangerous Polymerization	It is nor produced.

Section 11: Toxicological information**SHORT TERM TOXICITY**

Short term toxicity (acute or serious)	Oral rats LD50 formulated: 4854,37 mg/kg It classifies as a product which offers no danger
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Acute toxicity inhalation	It is not a volatile product.
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Dermal Toxicity	Slightly irritant.
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LONG TERM TOXICITY (CHRONIC)

Mutagenicity	The components of the product do not classify as mutagens according to the IRIS US EPA.
Carcinogenicity (IARC, EPA)	The components of the product do not classify as carcinogenic according to the IARC.
Local effects or systematic	The constant contact can only cause irritation.
Allergic sensitivity	Slight irritation of eyes and skin.
Specific effects	Slight irritation.
Scientific experiments	Information not available.

Section 12: Ecological information

Instability	Stable under normal storage conditions
Persistence / Degradability	The components of the product are biodegradable.
Bio-accumulation	Non expected.
Effects on the environment	It is not a toxic product.
ECOTOXICITY DATA	Biodegradable product.

Acute toxicity for fishes Information not available.

Acute toxicity for invertebrates Information not available.

Acute toxicity for algae Information not available.

Section 13: Considerations of final dispositions

Final waste or garbage dispositions Waste is considered as non-dangerous industrial garbage.

Disposal of containers and contaminated packaging Containers must not be used for purposes other than the recommended ones. Plastic and metal containers are completely recyclable.

Section 14: Transport information

By land, highway or by rail This product is not considered dangerous by the United Nation to the overland transport.

Seaway This product is not considered dangerous by the United Nation to seaways.

Airway This product is not considered dangerous by the United Nation to airways.

Waterway / Lacustrine This product is not considered dangerous by the United Nation to waterways/lacustrine.

Nº NU It is not considered a dangerous substance by the United Nations.

Applicable distinctive NCh 2190 Non applicable.

Risk type and division Non applicable.

Other information Information not available.

Section 15: Current legislation

Applicable International Regulation It is not considered a dangerous substance by the United Nation.

Applicable national regulations Law 16.744, Law 19.300, D.S. 40, NCh 1411/IV.

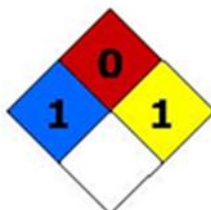
Label information	NCh 2190	: Non applicable
	Rombo NFPA	
	Health	: 1
	Inflammability	: 0
	Reactivity	: 1 (stable material but it can react violently with high temperature)
	Additional Information	: Non applicable
		: Without additional.

Risk phrases R38: Irritates Skin.

Safety phases Non applicable

CLASIFFICATION OF RISKS OF THE MIXTURE:

Rombo NCh 1411/IV



NFPA 704



Section 16: Other information

Molygrafit GBIO-2/M/SEP corresponds to a new generation of lubricants of natural origin, is biodegradable and it offers a large safety margin as it is classified a product with a formula that does not present any danger.

In the hypothetical case hint 5 kg of formula where splint in a confined environment of 32 m³, and it became volatized totally, an impossible situation given the physicochemical characteristics of the product; the emissions generated risk within 8 hours would be 4.8 times below the risk level established by the OSHA as a permissible limit of 15 mg/m³

The bisulphide content of the molybdenum disulphide in the formula does not present a risk and it is within a large margin of safety for human health as well as for the environment.

The information contained in this safety data sheet (HDS) corresponds to the information available in reliable international sources and provided by the producers of this substance at the moment of its emission.