Safety Data Sheet according to (EC) No 1907/2006

HYSOL MG 27F-0521LF

SDS No. : 1048213
V001.0
Revision: 02.04.2018
printing date: 02.04.2018

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier
HYSOL MG 27F-0521LF

Contains:
Phenol-formaldehyde polymer
Antimony trioxide
Brominated epoxy novolac

1.2. Relevant identified uses of the substance or mixture and uses advised against
Intended use:
Molding Compound

1.3. Details of the supplier of the safety data sheet

Manufacturer
Hysol Huawei Electronic Co., Ltd.
Songtiao Industrial Zone, Lianyungang, Jiangsu,China,
222000
T: +86 518-85155187
F: +86 518-85155060

1.4. Emergency telephone number
24 Hours Emergency Tel: +86 18115208319

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification (CLP):

Skin sensitizer	Category 1
H317 May cause an allergic skin reaction.	
Carcinogenicity	Category 2
H351 Suspected of causing cancer.	

2.2. Label elements

Label elements (CLP):

Hazard pictogram:

Signal word: Warning

Hazard statement: H317 May cause an allergic skin reaction.
H351 Suspected of causing cancer.

Precautionary statement: Prevention P280 Wear protective gloves/protective clothing.

Precautionary statement: Response P333+P313 If skin irritation or rash occurs: Get medical advice/attention.

2.3. Other hazards
None if used properly.

SECTION 3: Composition/information on ingredients

3.2. Mixtures

General chemical description:
Epoxy resin
Base substances of preparation:
resins
organic amine
Filler

Declaration of the ingredients according to CLP (EC) No 1272/2008:

Hazardous components CAS-No.	EC Number REACH-Reg No.	content	Classification
Silica, vitreous 60676-86-0	262-373-8	30- < 50 %	Not classified
Silica 7631-86-9	231-545-4	20- < 30%	Not classified
Formaldehyde, polymer with (chloromethyl)oxirane and 2-methylphenol 29690-82-2	-	10- < 20 %	Not classified
Phenol-formaldehyde polymer 9003-35-4	500-005-2	5- < 10 %	Eye Irrit. 2 H319 STOT SE 3 H335 Skin Sens. 1 H317
Antimony trioxide 1309-64-4	215-175-0	1- < 5 %	Carc. 2 H351
Brominated epoxy novolac 68541-56-0		1- < 5 %	Skin Sens. 1; Dermal H317
Phenol 108-95-2	203-632-7	0,1- < 1 %	Muta. 2 H341 STOT RE 2 H373 Skin Corr. 1B H314 Acute Tox. 3; Dermal H311 Acute Tox. 3; Oral H301 Acute Tox. 3; Inhalation H331
1,8-Diazabicyclo[5.4.0]undec-7-ene 6674-22-2	229-713-7	0,1- < 0,25 %	Acute Tox. 3; Oral H301 Skin Corr. 1B H314

For full text of the H - statements and other abbreviations see section 16 "Other information".
Substances without classification may have community workplace exposure limits available.

SECTION 4: First aid measures

4.1. Description of first aid measures

Inhalation:
Move to fresh air, consult doctor if complaint persists.

Skin contact:
Rinse with running water and soap.

Eye contact:
Immediately flush eyes with soft jet of water or eye rinse solution for at least 5 minutes. If pains remains (intensive smarting, sensivity to light, visual disturbance) continue flushing and contact/seek doctor or hospital.

Ingestion:
Rinse mouth, drink 1-2 glasses of water, do not induce vomiting, consult a doctor.

4.2. Most important symptoms and effects, both acute and delayed
SKIN: Rash, Urticaria.

Prolonged or repeated contact may cause eye irritation.

Prolonged or repeated contact may cause skin irritation.

4.3. Indication of any immediate medical attention and special treatment needed
See section: Description of first aid measures

SECTION 5: Firefighting measures

5.1. Extinguishing media
Suitable extinguishing media:
carbon dioxide, foam, powder, water spray jet, fine water spray

Extinguishing media which must not be used for safety reasons:
High pressure waterjet

5.2. Special hazards arising from the substance or mixture
Danger of decomposition if exposed to heat.
See section 10.

5.3. Advice for firefighters
Do not breathe combustion gases.
Wear self-contained breathing apparatus.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures
Avoid dust formation.
Depending on workplace dust concentration, wear dust filter mask with particle filter P1, P2 or P3.
Wear protective equipment.
Ensure adequate ventilation.

6.2. Environmental precautions
Do not allow to enter the ground / soil.

6.3. Methods and material for containment and cleaning up
Remove all sources of ignition.
Remove mechanically.
Use appropriate industrial vacuum cleaners or central vacuum systems for dust removal.
Dispose of contaminated material as waste according to Section 13.

6.4. Reference to other sections
See advice in section 8

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Avoid naked flames, sparking and sources of ignition.
Avoid dust development and deposition - dust explosion risk. Take precautionary measures against static discharges.

Hygiene measures:

Good industrial hygiene practices should be observed.
Wash hands before work breaks and after finishing work.
Do not eat, drink or smoke while working.
Extractors are required on all machines used for thermal or for cutting and grinding processes.

7.2. Conditions for safe storage, including any incompatibilities

Store in sealed original container.
Store in a cool, dry place.
Keep away from heat and direct sunlight.

7.3. Specific end use(s)

Molding Compound

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Occupational Exposure Limits

Diantimony trioxide	Limit value - Eight hours	Limit value - Eight hours	Limit value - Short term	Limit value - Short term
1309-64-4	ppm	mg/m ³	ppm	mg/m ³
Austria	Not available	0,1 inhalable aerosol	Not available	0,4 inhalable aerosol
Finland	Not available	0,5	Not available	Not available
Hungary	Not available	0,1	Not available	0,4
Latvia	Not available	1	Not available	Not available
Sweden	Not available	0,25 (Inhalable dust)	Not available	Not available
Switzerland	Not available	0,1 inhalable aerosol	Not available	Not available
United Kingdom	Not available	0,5	Not available	Not available

Silica	Limit value - Eight hours	Limit value - Eight hours	Limit value - Short term	Limit value - Short term
7631-86-9	ppm	mg/m ³	ppm	mg/m ³
Austria	Not available	4 inhalable aerosol	Not available	Not available
Belgium	Not available	10	Not available	Not available
Denmark	Not available	2 inhalable aerosol	Not available	4 inhalable aerosol
Finland	Not available	5	Not available	Not available
Germany (AGS)	Not available	4 inhalable aerosol	Not available	Not available
Germany (DFG)	Not available	4 inhalable aerosol	Not available	Not available
Ireland	Not available	6 Inhalable fraction	Not available	Not available
Ireland	Not available	2,4 Respirible fraction	Not available	Not available
Latvia	Not available	1	Not available	Not available
Switzerland	Not available	4 inhalable aerosol	Not available	Not available

USA - OSHA	Not available	80/ % silica total dust	Not available	Not available
United Kingdom	Not available	6 inhalable aerosol	Not available	Not available
United Kingdom	Not available	2,4 respirable aerosol	Not available	Not available

Phenol	Limit value - Eight hours	Limit value - Eight hours	Limit value - Short term	Limit value - Short term
108-95-2	ppm	mg/m ³	ppm	mg/m ³
Austria	2	8	4	16
Belgium	2	8	4	16
Denmark	1	4	2	8
European Union	2	8	4 (15 minutes average value)	16 (15 minutes average value)
Finland	2	8	4 (15 minutes average value)	16 (15 minutes average value)
France	2	7,8	4	15,6
Germany (AGS)	2 (Inhalable aerosol and vapour1)	8 (Inhalable aerosol and vapour)	4 (Inhalable aerosol and vapour)(15 minutes reference period)	16 (Inhalable aerosol and vapour)(15 minutes reference period)
Hungary	Not available	7,8	Not available	7,8
Ireland	2	8	4 (1)	16 (1)
Israel	5	19	Not available	Not available
Italy	2	8	4	16
Latvia	2	7,8	Not available	Not available
Poland	Not available	7,8	Not available	16
Spain	2	8	Not available	Not available
Sweden	1	4	4 (15 minutes reference period)	16 (15 minutes reference period)
Switzerland	5	19	5	19
The Netherlands	Not available	8	Not available	Not available
Turkey	2	8	4 (15 minutes average value)	16 (15 minutes average value)
USA - NIOSH	5	19	15,6 (Ceiling limit value (15 min)1)	60 (Ceiling limit value (15 min))
USA - OSHA	5	19	Not available	Not available
United Kingdom	2	Not available	Not available	Not available

Predicted No-Effect Concentration (PNEC):

Name on list	Environmental Compartment	Exposure period	Value				Remarks
			mg/l	ppm	mg/kg	others	
Diantimony trioxide 1309-64-4	aqua (freshwater)					0,113 mg/L	
Diantimony trioxide 1309-64-4	aqua (marine water)					0,0113 mg/L	
Diantimony trioxide 1309-64-4	STP					2,55 mg/L	
Diantimony trioxide 1309-64-4	sediment (freshwater)				11,2 mg/kg		
Diantimony trioxide 1309-64-4	sediment (marine water)				2,24 mg/kg		
Diantimony trioxide 1309-64-4	soil				37 mg/kg		
Phenol 108-95-2	aqua (freshwater)					0,0077 mg/L	
Phenol 108-95-2	aqua (marine water)					0,00077 mg/L	
Phenol 108-95-2	sediment (freshwater)				0,0915 mg/kg		
Phenol 108-95-2	sediment (marine water)				0,00915 mg/kg		
Phenol 108-95-2	soil				0,136 mg/kg		
Phenol 108-95-2	aqua (intermittent releases)					0,031 mg/L	

Derived No-Effect Level (DNEL):

Name on list	Application Area	Route of Exposure	Health Effect	Exposure Time	Value	Remarks
Diantimony trioxide 1309-64-4	Workers	Dermal	Long term exposure - systemic effects		281 mg/kg bw/day	
Diantimony trioxide 1309-64-4	Workers	Inhalation	Long term exposure - local effects		0,5 mg/m3	
Diantimony trioxide 1309-64-4	general population	oral	Long term exposure - systemic effects		168,6 mg/kg bw/day	
Diantimony trioxide 1309-64-4	general population	Dermal	Long term exposure - systemic effects		168,6 mg/kg bw/day	
Diantimony trioxide 1309-64-4	general population	Inhalation			0,1 mg/m3	
Phenol 108-95-2	Workers	Dermal	Long term exposure - systemic effects		1,23 mg/kg	
Phenol 108-95-2	Workers	Inhalation	Long term exposure - systemic effects		8 mg/m3	
Phenol 108-95-2	Workers	Inhalation	Acute/short term exposure - local effects		16 mg/m3	
Phenol 108-95-2	general population	Inhalation	Long term exposure - systemic effects		1,32 mg/m3	
Phenol 108-95-2	general population	Dermal	Long term exposure - systemic effects		0,4 mg/kg	
Phenol 108-95-2	general population	oral	Long term exposure - systemic effects		0,4 mg/kg	

Biological Exposure Indices:
None

8.2. Exposure controls:

Engineering controls:
In use may form flammable/explosive dust-air mixtures.
Thorough dedusting.
Avoid naked flames, sparking and sources of ignition.
Ensure good ventilation/suction at the workplace.
No further information, see section 7.

Respiratory protection:
Do not inhale dust.
In case of insufficient ventilation, wear suitable respiratory equipment.
Depending on workplace dust concentration, wear dust filter mask with particle filter P1, P2 or P3.
Ensure adequate ventilation.

Hand protection:
Chemical-resistant protective gloves (EN 374).
Suitable materials for short-term contact or splashes (recommended: at least protection index 2, corresponding to > 30 minutes permeation time as per EN 374):
nitrile rubber (NBR; >= 0.4 mm thickness)
Suitable materials for longer, direct contact (recommended: protection index 6, corresponding to > 480 minutes permeation time as per EN 374):
nitrile rubber (NBR; >= 0.4 mm thickness)
This information is based on literature references and on information provided by glove manufacturers, or is derived by analogy with similar substances. Please note that in practice the working life of chemical-resistant protective gloves may be considerably shorter than the permeation time determined in accordance with EN 374 as a result of the many influencing factors (e.g. temperature). If signs of wear and tear are noticed then the gloves should be replaced.

Eye protection:
Avoid eye contact.
Protective goggles
and/or
facial protection

Skin protection:
Wear suitable protective clothing.
Protective clothing that covers arms and legs.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Appearance	solid material granules, tablet black
Odor	characteristic
Odour threshold	No data available / Not applicable
pH	No data available / Not applicable
Initial boiling point	Polymerization may occur at elevated temperature.
Flash point	Not applicable
Decomposition temperature	No data available / Not applicable
Vapour pressure	No data available / Not applicable
Density (20 °C (68 °F))	1,8 - 2,0 g/cm3
Bulk density	No data available / Not applicable
Viscosity	No data available / Not applicable
Viscosity (kinematic)	No data available / Not applicable
Explosive properties	No data available / Not applicable
Solubility (qualitative) (20 °C (68 °F); Solvent: Water)	Insoluble
Solubility (qualitative)	Partially miscible

(20 ℃ (68 ℉); Solvent: ketones)

Solidification temperature	No data available / Not applicable
Melting point	No data available / Not applicable
Flammability	No data available / Not applicable
Auto-ignition temperature	No data available / Not applicable
Explosive limits	No data available / Not applicable
Partition coefficient: n-octanol/water	No data available / Not applicable
Evaporation rate	No data available / Not applicable
Vapor density	No data available / Not applicable
Oxidising properties	No data available / Not applicable

9.2. Other information

No data available / Not applicable

SECTION 10: Stability and reactivity

10.1. Reactivity
Reacts with strong oxidants.
Polymerization may occur at elevated temperature or in the presence of incompatible materials.

10.2. Chemical stability
Stable under recommended storage conditions.

10.3. Possibility of hazardous reactions
See section reactivity

10.4. Conditions to avoid
Danger of dust explosions.
Take measures to prevent the build-up of electrostatic charges.
Danger of decomposition if exposed to heat.
See "Handling and Storage" (Section 7) and "Incompatibility" (Section 10).

10.5. Incompatible materials
See section reactivity

10.6. Hazardous decomposition products
Hydrocarbons
Irritating vapors.
Bromine compounds
May produce fumes when heated to decomposition. Fumes may contain carbon monoxide and other toxic fumes.
See section 5.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

General toxicological information:
The mixture is classified based on the available hazard information for the ingredients as defined in the classification criteria for mixtures for each hazard class or differentiation in Annex I to Regulation 1272/2008/EC. Relevant available health/ecological information for the substances listed under Section 3 is provided in the following.

Skin irritation:
Prolonged or repeated contact may cause skin irritation.

Eye irritation:
Prolonged or repeated contact may cause eye irritation.
Avoid eye contact.

Sensitizing:
May cause an allergic skin reaction.

Carcinogenicity:
Suspected of causing cancer

Acute oral toxicity:

Hazardous components CAS-No.	Value type	Value	Route of application	Exposure time	Species	Method
Phenol-formaldehyde polymer 9003-35-4	LD50	4.100 mg/kg	oral		rat	
Antimony trioxide 1309-64-4	LD50	> 20.000 mg/kg	oral		rat	

Acute inhalative toxicity:

Hazardous components CAS-No.	Value type	Value	Route of application	Exposure time	Species	Method
Phenol 108-95-2	LC0		Aerosol	8 h	rat	OECD Guideline 403 (Acute Inhalation Toxicity)

Acute dermal toxicity:

Hazardous components CAS-No.	Value type	Value	Route of application	Exposure time	Species	Method

Skin corrosion/irritation:

Hazardous components CAS-No.	Result	Exposure time	Species	Method
Phenol 108-95-2	corrosive	3 min		

Serious eye damage/irritation:

Hazardous components CAS-No.	Result	Exposure time	Species	Method
Phenol 108-95-2	corrosive		rabbit	OECD Guideline 405 (Acute Eye Irritation / Corrosion)

Germ cell mutagenicity:

Hazardous components CAS-No.	Result	Type of study / Route of administration	Metabolic activation / Exposure time	Species	Method
Phenol 108-95-2	positive	in vitro mammalian cell micronucleus test	with and without		

Carcinogenicity:

Hazardous components CAS-No.	Result	Species	Sex	Exposure timeFrequency of treatment	Route of application	Method
Phenol 108-95-2	not carcinogenic	mouse	male/female	103 w daily ad libitum (continous)	oral: drinking water	OECD Guideline 451 (Carcinogenicity Studies)

Reproductive toxicity:

Hazardous substances CAS-No.	Result / Classification	Species	Exposure time	Species	Method
Phenol 108-95-2	NOAEL P = 71 mg/kg NOAEL F1 = 70 mg/kgNOAEL F2 = 1.000 mg/l	two-generation study oral: drinking water		rat	OECD Guideline 416 (Two-Generation Reproduction Toxicity Study)

SECTION 12: Ecological information

General ecological information:
The mixture is classified based on the available hazard information for the ingredients as defined in the classification criteria for mixtures for each hazard class or differentiation in Annex I to Regulation 1272/2008/EC. Relevant available health/ecological information for the substances listed under Section 3 is provided in the following.

12.1. Toxicity

Ecotoxicity:
Do not empty into drains / surface water / ground water.

Hazardous components CAS-No.	Value type	Value	Acute Toxicity Study	Exposure time	Species	Method
Antimony trioxide 1309-64-4	LC50	> 1.000 mg/l	Fish	96 h	Brachydanio rerio (new name: Danio rerio)	OECD Guideline 203 (Fish, Acute Toxicity Test)
Antimony trioxide 1309-64-4	EC50	> 1.000 mg/l	Daphnia	48 h	Daphnia magna	OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test)
Antimony trioxide 1309-64-4	EC50	67 mg/l	Algae	72 h	Selenastrum capricornutum (new name: Pseudokirchnerella subcapitata)	OECD Guideline 201 (Alga, Growth Inhibition Test)
Phenol 108-95-2	LC50	21,93 mg/l	Fish	14 d	Poecilia reticulata	OECD Guideline 204 (Fish, Prolonged Toxicity Test: 14-day Study)
	LC50	24,9 mg/l	Fish	96 h	Pimephales promelas	
Phenol 108-95-2	EC50	3,1 mg/l	Daphnia	48 h	Ceriodaphnia dubia	
Phenol 108-95-2	EC50	61,1 mg/l	Algae	96 h	Pseudokirchnerella subcapitata (reported as Selenastrum capricornutum)	
1,8-Diazabicyclo[5.4.0]undec-7-ene 6674-22-2	LC50	> 100 - 220 mg/l	Fish	96 h	Leuciscus idus	OECD Guideline 203 (Fish, Acute Toxicity Test)
1,8-Diazabicyclo[5.4.0]undec-7-ene 6674-22-2	EC50	50 mg/l	Daphnia	48 h	Daphnia magna	OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test)

12.2. Persistence and degradability

Persistence and Biodegradability:
The product is not biodegradable.

Hazardous components CAS-No.	Result	Route of application	Degradability	Method
Phenol 108-95-2	readily biodegradable	aerobic	62 %	OECD Guideline 301 C (Ready Biodegradability: Modified MITI Test (I))
1,8-Diazabicyclo[5.4.0]undec-7-ene 6674-22-2		aerobic	< 20 %	OECD Guideline 301 A (new version) (Ready Biodegradability: DOC Die Away Test)

12.3. Bioaccumulative potential / 12.4. Mobility in soil

Mobility:
Cured adhesives are immobile.

Bioaccumulative potential:
No data available.

Hazardous components CAS-No.	LogKow	Bioconcentration factor (BCF)	Exposure time	Species	Temperature	Method

Phenol 108-95-2		17,5	5 h	Danio rerio (reported as Brachydanio rerio)	25 °C	OECD Guideline 305 E (Bioaccumulation: Flow-through Fish Test)
Phenol 108-95-2	1,47				30 °C	OECD Guideline 117 (Partition Coefficient (n-octanol / water), HPLC Method)

12.5. Results of PBT and vPvB assessment

Hazardous components **CAS-No.**	**PBT/vPvB**
Antimony trioxide 1309-64-4	Not fulfilling Persistent, Bioaccumulative and Toxic (PBT), very Persistent and very Bioaccumulative (vPvB) criteria.
Phenol 108-95-2	Not fulfilling Persistent, Bioaccumulative and Toxic (PBT), very Persistent and very Bioaccumulative (vPvB) criteria.

12.6. Other adverse effects

No data available.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Product disposal:
Special waste incineration with the approval of the responsible local authority.

Disposal of uncleaned packages:
Use packages for recycling only when totally empty.
Packaging that cannot be cleaned are to be disposed of in the same manner as the product.

Waste code

08 04 09 waste adhesives and sealants containing organic solvents and other dangerous substances
The valid EWC waste code numbers are source-related. The manufacturer is therefore unable to specify EWC waste codes for the articles or products used in the various sectors. The EWC codes listed are intended as a recommendation for users. We will be happy to advise you.

SECTION 14: Transport information

14.1. UN number

Not hazardous according to RID, ADR, ADN, IMDG, IATA-DGR.

14.2. UN proper shipping name

Not hazardous according to RID, ADR, ADN, IMDG, IATA-DGR.

14.3. Transport hazard class(es)

Not hazardous according to RID, ADR, ADN, IMDG, IATA-DGR.

14.4. Packaging group

Not hazardous according to RID, ADR, ADN, IMDG, IATA-DGR.

14.5. Environmental hazards

Not hazardous according to RID, ADR, ADN, IMDG, IATA-DGR.

14.6. Special precautions for user

Not hazardous according to RID, ADR, ADN, IMDG, IATA-DGR.

14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

not applicable

SECTION 15: Regulatory information

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

VOC content (2010/75/EC) < 3 %

15.2. Chemical safety assessment

A chemical safety assessment has not been carried out.

SECTION 16: Other information

The labelling of the product is indicated in Section 2. The full text of all abbreviations indicated by codes in this safety data sheet are as follows:

H301 Toxic if swallowed.
H311 Toxic in contact with skin.
H314 Causes severe skin burns and eye damage.
H317 May cause an allergic skin reaction.
H319 Causes serious eye irritation.
H331 Toxic if inhaled.
H335 May cause respiratory irritation.
H341 Suspected of causing genetic defects.
H351 Suspected of causing cancer.
H373 May cause damage to organs through prolonged or repeated exposure.

Further information:

This information is based on our current level of knowledge and relates to the product in the state in which it is delivered. It is intended to describe our products from the point of view of safety requirements and is not intended to guarantee any particular properties.