



# MAGNESIUM SULPHATE

## PRODUCT AND COMPANY IDENTIFICATION

CHEMICAL NAME: Magnesium sulphate, anhydrous.

SYNONYMS:

CHEMICAL FAMILY: Sulphate Salt

MOLECULAR FORMULA:  $MgSO_4$

SHIPPING NAME:

PIN - (UN/NA): None controlled WHMIS: none controlled

PRODUCT USE: Fertilizer, feed additive

MANUFACTURER: Kali und Salz GmbH Friedrich-Ebert-Strabe 160, D-34111 Kassel  
Postbox 10 20 29, D-34111 Kassel Phone (+49) 561/301-1604. Fax (+49) 561/301-1436

SUPPLIER: Panther Industries Inc. Box 628 Davidson, SK S0G 1A0

EMERGENCY TELEPHONE NUMBER: (306) 567-2814

## COMPOSITION / INFORMATION ON INGREDIENTS

INGREDIENTS:	WEIGHT %	C.A.S. REGISTRY NUMBER:
Magnesium Sulphate	98.0	007487-88-9

## HAZARDS IDENTIFICATION

SPECIAL HAZARDS INFORMATION FOR HUMANS AND ENVIRONMENT: no

## FIRST AID MEASURES

GENERAL INFORMATION: In the event of persistent symptoms receive medical treatment.

IN CASE OF INHALATION: In the event of symptoms refer for medical treatment.

IN CASE OF SKIN CONTACT: Wash with soap and water.

IN CASE OF EYE CONTACT: Flush open eyes with plenty of water.

IN CASE OF INGESTION: Rinse out mouth and give plenty of water to drink.

## FIRE FIGHTING MEASURES

SUITABLE EXTINGUISHING MATERIAL: Product does not burn, fire-extinguishing activities according to surrounding.

EXTINGUISHING MATERIAL THAT MAY NOT BE USED FOR SAFETY REASONS: no

SPECIAL EXPOSURE HAZARDS ARISING FROM THE SUBSTANCE, COMBUSTIVE PRODUCTS OR RESULTING GASES: In case of fire, formation of dangerous gases possible. Sulphur dioxide ( $SO_2$ ).

SPECIAL PROTECTIVE EQUIPMENT FOR FIREFIGHTERS: Do not inhale explosion and/or combustion gases.

ADDITIONAL INFORMATION: Collect contaminated fire fighting water separately, must not be discharged into the drains.

## ACCIDENTAL RELEASE MEASURES

PERSONAL PRECAUTIONS: Avoid dust formation.

ENVIRONMENTAL PRECAUTIONS: Do not discharge into the drains or bodies of water.

METHODS FOR CLEANING UP/TAKING UP: Disposal according to regulations. Flush away residues with water. Take up mechanically and send for disposal.

ADDITIONAL INFORMATION: Information for safe handling look up chapter 7. Information for personal



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protective equipment look up chapter 8. Information for disposal look up chapter 13.

## HANDLING AND STORAGE

ADVICE ON SAFE HANDLING: No special measures necessary if used correctly. Take the usual precautions when handling with chemicals.

ADVICE ON PROTECTION AGAINST FIRE AND EXPLOSION: The product is not combustible. No special measures necessary.

REQUIREMENTS FOR STORAGE ROOMS AND VESSELS: No special measures required.

ADVICE ON STORAGE COMPATIBILITY: Keep away from water.

FURTHER INFORMATION ON STORAGE CONDITIONS: Store in a dry place. Product is hygroscopic.

STORAGE GROUP: 10-13

INFORMATION ON STORAGE STABILITY: Unlimited stability.

## EXPOSURE CONTROLS / PERSONAL PROTECTION

ADDITIONAL ADVICE ON SYSTEM DESIGN: No.

INGREDIENTS WITH OCCUPATIONAL EXPOSURE LIMITS TO BE MONITORED:

CAS-No.	NAME	CODE	[mg/m <sup>3</sup> ] [ml/m <sup>3</sup> ]	REMARK
	DUST	MAK	6	GENERAL LIMIT (RFA)

RESPIRATORY PROTECTION: In case of dust formation wear micro dust mask.

HAND PROTECTION: Rubber gloves.

EYE PROTECTION: Tightly fitting goggles.

SKIN PROTECTION: No.

GENERAL PROTECTIVE MEASURES: No.

HYGIENE MEASURES: Do not eat or drink when working. Brush soiled clothing. After work wash thoroughly.

## PHYSICAL AND CHEMICAL PROPERTIES

PHYSICAL STATE: cristalline

APPEARANCE: whitish

ODOUR: Odourless

pH: 9.0 (at 340 g/l, 20 °C) (mild alkaline)

BOILING POINT (decomposition): not determined

MELTING POINT: 1120-1150 °C

FLASH POINT: Not applicable

FLAMMABLE SOLID: no

FLAMMABLE GAS: no

COMBUSTION TEMPERATURE: no

AUTOIGNITION: no

LOWER EXPLOSION LIMIT: no

UPPER EXPLOSION LIMIT: no

VAPOUR PRESSURE: 0 mbar at 20 °C

DENSITY: 2.7 g/m<sup>3</sup> at 20 °C 1013 hPa

BULK DENSITY: approx. 1300 kg/m<sup>3</sup>

SOLUBILITY IN WATER: 340 g/l at 20 °C 1013 hPa

SOLUBILITY/OTHER: not determined

PARTITION COEFFICIENT (log p<sub>OW</sub>): not determined

VISCOSITY: 1



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COMBUSTION VALUE: 1  
 OXIDIZING PROPERTIES: no  
 EXPLOSIVE PROPERTIES: no  
 ADDITIONAL INFORMATION: Physical dates refer to pure product.

## STABILITY AND REACTIVITY

CONDITIONS TO AVOID: In case of addition of water warming up.  
 MATERIALS TO AVOID: No hazardous reactions known.  
 HAZARDOUS DECOMPOSITION PRODUCTS: Toxic gases/vapours. Sulphurous oxides (SO<sub>x</sub>)  
 THERMAL DECOMPOSITION: >700 degree oC

## TOXICOLOGICAL INFORMATION

ACUTE TOXICITY/IRRITABILITY/SENSITIZATION  
 LD 50 ACUTE ORAL: not determined  
 LC 50 ACUTE INHALATION: not determined  
 IRRITABILITY EYE: no  
 SENSITIZATION RESPIRATORY SYSTEM: no  
 TOXICITY TEST: No experimental indication of genotoxic effects. Substance has no mutagen activity (Ames test).  
 ADDITIONAL INFORMATION: Toxical dates refer to pure product. Our date are not enough for total texture toxic judgement. Follow the usual hygenic directives for handling with chemicals.

LD 50 ACUTE DERMAL: not determined  
 IRRITABILITY SKIN: no  
 SENSITIZATION SKIN: no

## ECOLOGICAL INFORMATION

DATE ON ELIMINATION (PERSISTANCE AND DEGRADABILITY)  
 PHYSICO-CHEMICAL DEGRADABILITY: not applicable. Inorganic product can not be eliminated from the water by biological purification processes.  
 BIOLOGICAL DEGRADABILITY: not applicable. Inorganic product can not be eliminated from the water by biological purification processes.  
 DEGRADABILITY: not applicable. Inorganic product can not be eliminated from the water by biological purification processes.  
 BIOLOGICAL ELIMINABILITY: not applicable. Inorganic product can not be eliminated from the water by biological purification processes.

### ECOTOXICOLOGICAL EFFECTS:

	VALUE	SPECIES	METHOD	VALIDATION
Fish	LC50 14000 mg/l (24h)	Leuciscus Idus	DIN 38412 L15	Ref. (1)
Daphnia	EC50 1700 mg/l (24h)	Daphnia Magna	DIN 38412 L11	Ref. (1)
Algae	EC50 2700 mg/l (72h)	Scenedesmus subspicatus	DIN 38412 L34	Ref. (1)
Bacteria	EC50 84000 mg/l (30 min)	phosphoreum	Photobacterium DIN 38412 L9	Ref. (1)

BEHAVIOR IN SEWAGE PLANT: When low concentrations are discharged correctly into adapted biological sewage treatment plants, interference with the degradation activity of activated sludge is not likely.  
 ADDITIONAL ECOLOGICAL INFORMATION  
 AOX: Not applicable.  
 GENERAL REGULATION: Product is not allowed to discharge into aquatic environment.



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## DISPOSAL CONSIDERATIONS

WASTE CODE NO.: 06 03 03

NAME OF WASTE: solid salts containing sulphates, sulphites or sulphides.

RECOMMENDATIONS FOR THE PRODUCT: In accordance with regulations for special waste, must be taken, after pretreatment, to an authorized special waste disposal site.

RECOMMENDATIONS FOR PACKAGING: Uncontaminated packaging may be taken for recycling. Contaminated packaging should be emptied as far as possible and after appropriate cleansing may be taken for reuse.

RECOMMENDED CLEANSING AGENT: no

## TRANSPORT INFORMATION

LAND AND INLAND NAVIGATION TRANSPORT (ADR/RID/GGVS/GGVE/ADNR)

REMARKS: No hazardous material as defined by the prescriptions.

## REGULATORY INFORMATION

REMARKS FOR CLASSIFICATION: no

R-PHRASES: not applicable.

S-PHRASES: not applicable.

SPECIAL LABELING FOR CERTAIN PREPARATIONS: no

NATIONAL REGULATIONS

RESTRICTION OF APPLICATION: no

DECREE FOR CASE OF INTERFERENCE: not applicable

CLASSIFICATION ACCORDING TO VbF: VbF; is not subject to decree for compostible liquids.

WATER HAZARD CLASS: 1 KBwS-classification

OTHER REGULATIONS, RESTRICTIONS AND PROHIBITION REGULATIONS: no

## OTHER INFORMATION

RECOMMENDED USES AND RESTRICTIONS: no

THE FOLLOWING HAS BEEN REVISED SINCE THE LAST ISSUE: ALL, new format

PREVIOUS REVISION DATE: October 10 2007

## REFERENCES:

1. Manufacturers MSDS

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