SAFETY DATA SHEET

依据国标GB13690-2009及GB/T16483-2008、化学品分类和标签全球协调制度(GHS)

VULKACIT DM/MG-C

00026506

Section 1. Identification

GHS product identifier : VULKACIT DM/MG-C

Uses : Accelerator

Supplier/Manufacturer : LANXESS Chemical (China) Co., Ltd.
16/F, Park Place,
NO.1601 Nan Jing Road(West),
Shanghai, 200040, P.R. China
tele:021-61096666
朗盛化学(中国)有限公司
上海市静安区南京西路1601号 越洋广场16楼
电话: 021-61096666

Emergency telephone number : +86 532 83889090

Section 2. Hazards identification

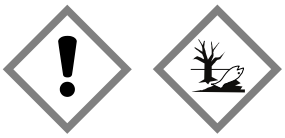
Classification of the substance or mixture : SKIN SENSITIZATION - Category 1
AQUATIC TOXICITY (ACUTE) - Category 1
AQUATIC TOXICITY (CHRONIC) - Category 1

Percentage of the mixture consisting of ingredient(s) of unknown toxicity: 5%

Percentage of the mixture consisting of ingredient(s) of unknown hazards to the aquatic environment: 5%

GHS label elements

Hazard pictograms :



Signal word : Warning

Hazard statements : May cause an allergic skin reaction. Very toxic to aquatic life with long lasting effects.

Precautionary statements

Prevention : Wear protective gloves. Avoid release to the environment. Avoid breathing dust. Contaminated work clothing should not be allowed out of the workplace.

Response : Collect spillage. IF ON SKIN: Wash with plenty of soap and water. Wash contaminated clothing before reuse. If skin irritation or rash occurs: Get medical attention.

Storage : Not applicable.

Disposal : Dispose of contents and container in accordance with all local, regional, national and international regulations.

Other hazards which do not result in classification : Fine dust clouds may form explosive mixtures with air. Handling and/or processing of this material may generate a dust which can cause mechanical irritation of the eyes, skin, nose and throat.

Remarks : Contact with acids liberates toxic gas.

Section 3. Composition/information on ingredients

Substance/mixture : Mixture

Other means of identification : Not available.

CAS number/other identifiers

Ingredient name	%	CAS number
2,2'-Dibenzothiazole disulfide	>94	120-78-5

There are no ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

Occupational exposure limits, if available, are listed in Section 8.

Section 4. First-aid measures

Description of necessary first aid measures

Eye contact : Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Get medical attention if irritation occurs.

Inhalation : Remove victim to fresh air and keep at rest in a position comfortable for breathing. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention if adverse health effects persist or are severe. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband. In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.

Skin contact : Wash with plenty of soap and water. Remove contaminated clothing and shoes. Continue to rinse for at least 10 minutes. Get medical attention. In the event of any complaints or symptoms, avoid further exposure. Wash clothing before reuse. Clean shoes thoroughly before reuse.

Ingestion : Wash out mouth with water. Remove dentures if any. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention if adverse health effects persist or are severe. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

Most important symptoms/effects, acute and delayed

Potential acute health effects

Eye contact : Exposure to airborne concentrations above statutory or recommended exposure limits may cause irritation of the eyes.

Inhalation : No known significant effects or critical hazards.

Skin contact : May cause an allergic skin reaction.

Ingestion : No known significant effects or critical hazards.

Over-exposure signs/symptoms

Section 4. First-aid measures

Eye contact : Adverse symptoms may include the following:
irritation
redness

Inhalation : Adverse symptoms may include the following:
respiratory tract irritation
coughing

Skin contact : Adverse symptoms may include the following:
irritation
redness

Ingestion : No specific data.

Indication of immediate medical attention and special treatment needed, if necessary

Specific treatments : No specific treatment.

Protection of first-aiders : No action shall be taken involving any personal risk or without suitable training. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wash contaminated clothing thoroughly with water before removing it, or wear gloves.

See toxicological information (Section 11)

Section 5. Fire-fighting measures

Extinguishing media

Suitable extinguishing media : Use dry chemical powder.

Unsuitable extinguishing media : Do not use water jet.

Specific hazards arising from the chemical : Fine dust clouds may form explosive mixtures with air. This material is very toxic to aquatic life with long lasting effects. Fire water contaminated with this material must be contained and prevented from being discharged to any waterway, sewer or drain.

Hazardous thermal decomposition products : Decomposition products may include the following materials:
carbon dioxide
carbon monoxide
nitrogen oxides
sulfur oxides

Special protective actions for fire-fighters : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. Move containers from fire area if this can be done without risk. Use water spray to keep fire-exposed containers cool.

Special protective equipment for fire-fighters : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

Section 6. Accidental release measures

Personal precautions, protective equipment and emergency procedures : No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilt material. Shut off all ignition sources. No flares, smoking or flames in hazard area. Avoid breathing dust. Provide adequate ventilation. Put on appropriate personal protective equipment.

Environmental precautions : Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air). Very toxic to aquatic life. Very toxic to aquatic life with long lasting effects. Collect spillage.

Methods and materials for containment and cleaning up

Small spill : Move containers from spill area. Vacuum or sweep up material and place in a designated, labelled waste container. Use spark-proof tools and explosion-proof equipment. Dispose of via a licensed waste disposal contractor.

Large spill : Move containers from spill area. Approach the release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Vacuum or sweep up material and place in a designated, labelled waste container. Avoid creating dusty conditions and prevent wind dispersal. Use spark-proof tools and explosion-proof equipment. Dispose of via a licensed waste disposal contractor. Note: see Section 1 for emergency contact information and Section 13 for waste disposal.

Section 7. Handling and storage

Precautions for safe handling : Put on appropriate personal protective equipment (see Section 8). Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. Persons with a history of skin sensitization problems should not be employed in any process in which this product is used. Do not get in eyes or on skin or clothing. Do not ingest. Avoid breathing dust. Avoid release to the environment. Avoid the creation of dust when handling and avoid all possible sources of ignition (spark or flame). Prevent dust accumulation. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Electrical equipment and lighting should be protected to appropriate standards to prevent dust coming into contact with hot surfaces, sparks or other ignition sources. Take precautionary measures against electrostatic discharges. To avoid fire or explosion, dissipate static electricity during transfer by earthing and bonding containers and equipment before transferring material. Empty containers retain product residue and can be hazardous.

Conditions for safe storage, including any incompatibilities : Store in accordance with local regulations. Store in a segregated and approved area. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Eliminate all ignition sources. Separate from oxidizing materials. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabelled containers. Use appropriate containment to avoid environmental contamination.

Remarks : Take precautionary measures against electrostatic discharges.

Section 8. Exposure controls/personal protection

Control parameters

Occupational exposure limits

Ingredient name	Exposure limits
Hong Kong	
Distillates, petroleum, solvent-dewaxed heavy paraffinic	**Labour Department, OS&H Branch (Hong Kong, 4/2002).** STEL: 10 mg/m³ 15 minutes. TWA: 5 mg/m³ 8 hours.

Recommended monitoring procedures : If this product contains ingredients with exposure limits, personal, workplace atmosphere or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment. Reference should be made to appropriate monitoring standards. Reference to national guidance documents for methods for the determination of hazardous substances will also be required.

Appropriate engineering controls : Use only with adequate ventilation. If user operations generate dust, fumes, gas, vapour or mist, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits. The engineering controls also need to keep gas, vapour or dust concentrations below any lower explosive limits. Use explosion-proof ventilation equipment.

Environmental exposure controls : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

Individual protection measures

Hygiene measures : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Contaminated work clothing should not be allowed out of the workplace. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

Eye protection : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If operating conditions cause high dust concentrations to be produced, use dust goggles.
Recommended: safety glasses with side-shields

Skin protection

Hand protection : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. After contamination with product change the gloves immediately and dispose of them according to relevant national and local regulations
Recommended: (< 1 hour) PVC , nitrile rubber , Polychloroprene - CR

Body protection : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product. Recommended: Wear protective clothing.
Possible: Chemical-resistant gloves. Recommended: polyvinyl chloride (PVC), nitrile rubber or Polyvinyl chloride - PVC

Section 8. Exposure controls/personal protection

Other skin protection : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.
Recommended: Wear protective clothing.

Respiratory protection : Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.
Recommended: Dust-protection mask

Section 9. Physical and chemical properties

Appearance

Physical state : Solid. [oil-coated granules]

Colour : White. Beige.

Odour : Characteristic. [Slight]

Odour threshold : Not available.

pH : Not available.

Melting point : >168°C (>334,4°F)

Boiling point : Not available.

Flash point : Not available.

Burning time : Not available.

Burning rate : Not available.

Evaporation rate : Not available.

Risk of dust explosion : In the case of dusty organic products the possibility of a dust explosion should always be considered.

Flammability (solid, gas) : Not available.

Lower and upper explosive (flammable) limits : Not available.

Vapour pressure : <0.0001 hPa (25℃)

Vapour density : Not available.

Density : 1,5 kg/L (20℃)

Relative density : Not available.

Solubility : 0,0002 g/l (water)

Ignition temperature : 420°C

Auto-ignition temperature : Not available.

Decomposition temperature : Not available.

SADT : Not available.

Viscosity : Not available.

Section 10. Stability and reactivity

Reactivity : No specific test data related to reactivity available for this product or its ingredients.

Chemical stability : The product is stable.

Possibility of hazardous reactions : Hazardous reactions or instability may occur under certain conditions of storage or use.
Conditions may include the following: contact with acids
Reactions may include the following: liberation of toxic gas

Conditions to avoid : Take precautionary measures against static discharges. In the case of dusty organic products the possibility of a dust explosion should always be considered.

Incompatible materials : Reactive or incompatible with the following materials:
acids
oxidizing materials

Hazardous decomposition products : Contact with acids liberates toxic gas.

Section 11. Toxicological information

Information on toxicological effects

Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure	Test
2,2'-Dibenzothiazole disulfide	LD50 Oral	Rat - Male, Female	>7940 mg/kg	-	-
2,2'-Dibenzothiazole disulfide	LD50 Dermal	Rabbit - Male, Female	>7940 mg/kg	-	-

Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation
2,2'-Dibenzothiazole disulfide	Skin - Erythema/Eschar	Rabbit	0	24 hours	7 days
	Skin - Oedema	Rabbit	0	24 hours	7 days
	Eyes - Draize	Rabbit	0,6	24 hours	7 days

Conclusion/Summary

Skin : 2-Mercaptobenzothiazole Disulfide:Non-irritating

Eyes : 2-Mercaptobenzothiazole Disulfide:Non-irritating

Sensitisation

Product/ingredient name	Route of exposure	Species	Result
2,2'-Dibenzothiazole disulfide	skin	Guinea pig	Sensitising

Mutagenicity

Section 11. Toxicological information

Product/ingredient name	Test	Experiment	Result
2,2'-Dibenzothiazole disulfide	Ames test	Experiment: In vitro Subject: Bacteria Metabolic activation: with/without S9-mix	Negative
	-	Experiment: In vitro Subject: Mammalian-Animal Metabolic activation: with/without S9-mix	Negative
	Micronucleus assay *	Experiment: In vivo Subject: Mammalian-Animal	Negative

Conclusion/Summary : 2-Mercaptobenzothiazole Disulfide:In vivo tests have shown positive results.

Reproductive toxicity

Product/ingredient name	Effects	Species	Dose	Exposure
2,2'-Dibenzothiazole disulfide	-	Rat - Male, Female	Oral: 15000 ppm NOAEL: P; F1; F2	10 weeks; *
	-	Rat	Oral: 596 mg/kg bw/day NOAEL: Developmental toxicity	20 days; 7 days per week
	-	Rat	Oral: 127 mg/kg bw/day NOAEL: Maternal toxicity	20 days; 7 days per week

Conclusion/Summary : 2-Mercaptobenzothiazole Disulfide:* Read-across from: MBT

Information on the likely routes of exposure : Routes of entry anticipated: Oral, Dermal, Inhalation.

Potential acute health effects

Eye contact : Exposure to airborne concentrations above statutory or recommended exposure limits may cause irritation of the eyes.

Skin contact : May cause an allergic skin reaction.

Symptoms related to the physical, chemical and toxicological characteristics

Eye contact : Adverse symptoms may include the following:
irritation
redness

Inhalation : Adverse symptoms may include the following:
respiratory tract irritation
coughing

Skin contact : Adverse symptoms may include the following:
irritation
redness

Ingestion : No specific data.

Section 11. Toxicological information

Delayed and immediate effects and also chronic effects from short and long term exposure

Short term exposure

Potential immediate effects : Not available.

Potential delayed effects : Not available.

Long term exposure

Potential immediate effects : Not available.

Potential delayed effects : Not available.

Potential chronic health effects

Conclusion/Summary : 2-Mercaptobenzothiazole Disulfide:* Read-across from: MBT

General : Repeated or prolonged inhalation of dust may lead to chronic respiratory irritation.

Numerical measures of toxicity

Acute toxicity estimates

Route	ATE value (Acute Toxicity Estimates)
Not available.	

Section 12. Ecological information

Toxicity

Product/ingredient name	Test	Result	Species	Exposure
2,2'-Dibenzothiazole disulfide	EU C.2 (Acute Toxicity for Daphnia)	Acute EC50 211 mg/l Fresh water	Daphnia - Daphnia magna	48 hours
	OECD 209 Activated Sludge, Respiration Inhibition Test	Acute EC50 >10000 mg/l Fresh water	Micro-organism - activated sludge	3 hours
	EU C.3	Acute IC50 >40 mg/l Fresh water	Algae - Desmodesmus subspicatus	72 hours
	OECD 203 Fish, Acute Toxicity Test	Acute LC0 <1 mg/l Fresh water	Fish - Oncorhynchus mykiss	96 hours
	EU C.3	Chronic NOEC >=40 mg/l Fresh water	Algae - Desmodesmus subspicatus	72 hours

Persistence/degradability

Product/ingredient name	Test	Result	Dose	Inoculum
2,2'-Dibenzothiazole disulfide	OECD 301C Ready Biodegradability - Modified MITI Test (I)	0 % - Not readily - 28 days	100 mg/l	Activated sludge

Section 12. Ecological information

Product/ingredient name	Aquatic half-life	Photolysis	Biodegradability
2,2'-Dibenzothiazole disulfide	-	50%; 0.05 day(s)	Not readily

Bioaccumulative potential

Product/ingredient name	$LogP_{ow}$	BCF	Potential
2,2'-Dibenzothiazole disulfide	4,5	<=51	low

Mobility in soil

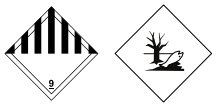
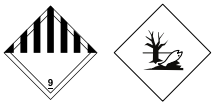
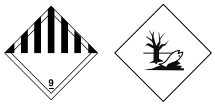
Soil/water partition coefficient (K_{OC}) : Not available.

Other adverse effects : No known significant effects or critical hazards.

Section 13. Disposal considerations

Disposal methods : The generation of waste should be avoided or minimised wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers.

Section 14. Transport information

	China	IMDG	IATA
UN number	UN3077	UN3077	UN3077
UN proper shipping name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (DIBENZOTHIAZYLDISULPHIDE)	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (DIBENZOTHIAZYLDISULPHIDE)	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (DIBENZOTHIAZYLDISULPHIDE)
Transport hazard class(es)	9 	9 	9 
Packing group	III	III	III
Environmental hazards	Yes	Yes	Yes

Section 14. Transport information

Special precautions for user		**Emergency schedules (EmS)** F-A, S-F	**Passenger aircraft** 956: 400 kg **Cargo aircraft** 956: 400 kg

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code : Not available.

Hazard notes:

Environmentally hazardous substance.
Keep separated from foodstuffs.

Section 15. Regulatory information

Following regulations were referred :
1. Regulations of the Safety Administration of Dangerous Chemicals
2. Safety rules for classification, precautionary labeling and precautionary statements of chemicals for Chemicals in China (GB20576~20602)
3. Lists of dangerous goods (GB12268-2005)
4. Safety Data Sheet for Chemical Products -Content and Order of Sections (GB/T16483-2008)
5. Classification and Code of Dangerous Goods (GB6944-2005)
6. General rule for classification and hazard communication of chemicals (GB 13690-2009)
7. List of hazardous waste (2008.08.01)
8. List of hazardous chemicals(2002)
9. Occupational exposure limits for hazardous agents in the workplace Part 1: Chemical hazardous agents

List of Goods banned for Importing

None of the components are listed.

List of Goods banned for Exporting

None of the components are listed.

List of Toxic Chemicals Severely Restricted for Importing & Exporting by China

None of the components are listed.

Section 16. Other information

History

Date of issue/Date of revision	:	2013-08-07
Date of previous issue	:	2013-08-07
Version	:	5.01

◤ **Indicates information that has changed from previously issued version.**

Notice to reader

Section 16. Other information

The data given here is based on current knowledge and experience. The purpose of this Safety Data Sheet is to describe the products in terms of their safety requirements. The above details do not imply any guarantee concerning composition, properties or performance.