

1. Identification

Product identifier	DPA™	
Other means of identification	None.	
Recommended use	Dry Penetrating Agent	
Recommended restrictions	None known.	
Manufacturer/Importer/Supplier/Distributor information		
Manufacturer		
Company name	CETCO, an MTI Company	
Address	2870 Forbs Avenue Hoffman Estates, IL 60192 United States	
Telephone	General Information	800 527-9948
Website	http://www.cetco.com/	
E-mail	safetydata@mineralstech.com	
Emergency phone number	Emergency	1.866.519.4752/1 760 476 3962
Supplier	Not available.	

2. Hazard identification

Physical hazards	Not classified.	
Health hazards	Acute toxicity, oral	Category 4
	Acute toxicity, inhalation	Category 2
	Skin corrosion/irritation	Category 1
	Serious eye damage/eye irritation	Category 1
	Sensitization, skin	Category 1
Environmental hazards	Hazardous to the aquatic environment, acute hazard	Category 2
	Hazardous to the aquatic environment, long-term hazard	Category 3

Label elements



Signal word	Danger
Hazard statement	Harmful if swallowed. Causes severe skin burns and eye damage. May cause an allergic skin reaction. Causes serious eye damage. Harmful to aquatic life. Harmful to aquatic life with long lasting effects.
Precautionary statement	
Prevention	Keep out of reach of children. Read label before use. Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Wash thoroughly after handling. Do not eat, drink or smoke when using this product. Contaminated work clothing should not be allowed out of the workplace. Contaminated work clothing must not be allowed out of the workplace. Avoid release to the environment. Wear protective gloves/protective clothing/eye protection/face protection.
Response	If medical advice is needed, have product container or label at hand. If swallowed: Rinse mouth. Do NOT induce vomiting. IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower. IF INHALED: Remove person to fresh air and keep comfortable for breathing. If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER/doctor/. Specific treatment (see on this label). If skin irritation or rash occurs: Get medical advice/attention. Take off contaminated clothing and wash it before reuse.
Storage	Store locked up.

Disposal	Dispose of contents/container (in accordance with related regulations).
Other hazards	None known.
Supplemental information	27.01% of the mixture consists of component(s) of unknown acute hazards to the aquatic environment. 27.01% of the mixture consists of component(s) of unknown long-term hazards to the aquatic environment.

3. Composition/information on ingredients

Mixtures

Chemical name	Common name and synonyms	CAS number	%
SULFAMIC ACID		5329-14-6	70 - < 80
SODIUM DODECYLBENZENESULFONATE		25155-30-0	< 1
Other components below reportable levels			20 - < 30

DSD: Directive 67/548/EEC.

CLP: Regulation No. 1272/2008.

#: This substance has been assigned Community workplace exposure limit(s).

M: M-factor

PBT: persistent, bioaccumulative and toxic substance.

vPvB: very persistent and very bioaccumulative substance.

*Designates that a specific chemical identity and/or percentage of composition has been withheld as a trade secret.

Composition comments Not applicable to consumer products. The full text for all R- and H-phrases is displayed in section 16. For the full text of the R phrases mentioned in this Section, see Section 15. This product is not considered to be a carcinogen by IARC, ACGIH, NTP, or OSHA.

4. First-aid measures

Inhalation

If exposed to excessive levels of dusts or fumes, remove to fresh air and get medical attention if cough or other symptoms develop. If symptoms are experienced, remove source of contamination or move victim to fresh air. Oxygen or artificial respiration if needed. Do not use mouth-to-mouth method if victim inhaled the substance. Induce artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device. Get medical attention immediately. Call a physician if symptoms develop or persist. Get medical attention if symptoms persist.

Skin contact

Before washing use a dry brush to remove dust from skin. Remove contaminated clothing immediately and wash skin with soap and water. Immediately flush skin with running water for at least 20 minutes. Take off immediately all contaminated clothing. Remove and isolate contaminated clothing and shoes. Call a physician or poison control center immediately. Get medical attention if irritation develops or persists. Get medical attention immediately. Chemical burns must be treated by a physician. For minor skin contact, avoid spreading material on unaffected skin. Wash contaminated clothing before reuse. Wash clothing separately before reuse. Launder contaminated clothing before reuse.

Eye contact

Immediately flush eyes with plenty of water for at least 15 minutes. If a contact lens is present, DO NOT delay irrigation or attempt to remove the lens. Continue rinsing. Get medical attention immediately.

Ingestion

IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician. Rinse mouth thoroughly. Never give anything by mouth to a victim who is unconscious or is having convulsions. Do not induce vomiting without advice from poison control center. Do not induce vomiting. If vomiting occurs, keep head low so that stomach content doesn't get into the lungs. Do not use mouth-to-mouth method if victim ingested the substance. Induce artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device.

Most important symptoms/effects, acute and delayed

Burning pain and severe corrosive skin damage. Causes serious eye damage. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Direct contact with eyes may cause temporary irritation. Permanent eye damage including blindness could result. May cause allergic skin reaction. Prolonged exposure may cause chronic effects.

Indication of immediate medical attention and special treatment needed

Provide general supportive measures and treat symptomatically. Chemical burns: Flush with water immediately. While flushing, remove clothes which do not adhere to affected area. Call an ambulance. Continue flushing during transport to hospital. In case of shortness of breath, give oxygen. Keep victim warm. Keep victim under observation. Symptoms may be delayed.

General information

Immediate medical attention is required. In the case of accident or if you feel unwell, seek medical advice immediately (show the label where possible). IF exposed or concerned: Get medical advice/attention. Show this safety data sheet to the doctor in attendance. In case of shortness of breath, give oxygen. Keep victim warm. Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. Wash contaminated clothing before reuse.

5. Fire-fighting measures

Suitable extinguishing media	Water spray. Water fog. Foam. Dry chemical powder. Carbon dioxide (CO ₂). Use any media suitable for the surrounding fires.
Unsuitable extinguishing media	None known.
Specific hazards arising from the chemical	During fire, gases hazardous to health may be formed.
Special protective equipment and precautions for firefighters	Firefighters should wear full protective clothing including self contained breathing apparatus. As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.
Fire fighting equipment/instructions	In the event of fire, cool tanks with water spray.
Specific methods	Cool containers exposed to flames with water until well after the fire is out.
General fire hazards	Not a fire hazard. No unusual fire or explosion hazards noted.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures	Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Keep out of low areas. Wear appropriate protective equipment and clothing during clean-up. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ventilate closed spaces before entering them. Local authorities should be advised if significant spillages cannot be contained.
Methods and materials for containment and cleaning up	This product is miscible in water. Should not be released into the environment. Stop leak if you can do so without risk. Collect spillage. Dike the spilled material, where this is possible. Use water spray to reduce vapors or divert vapor cloud drift. Prevent product from entering drains. Prevent entry into waterways, sewer, basements or confined areas. Following product recovery, flush area with water. Large spills may be neutralized with dilute alkaline solutions of soda ash, or lime.
Environmental precautions	Avoid release to the environment. Contact local authorities in case of spillage to drain/aquatic environment. Prevent further leakage or spillage if safe to do so. Do not contaminate water. Avoid discharge into drains, water courses or onto the ground. Do not flush into surface water or sanitary sewer system.

7. Handling and storage

Precautions for safe handling	Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Do not get this material in your eyes, on your skin, or on your clothing. Do not breathe dust/fume/gas/mist/vapors/spray. Wash hands after handling and before eating. Do not get this material in contact with eyes. Do not get this material in contact with skin. Do not taste or swallow. Avoid contact with skin and eyes. Avoid contact during pregnancy/while nursing. Avoid prolonged exposure. Do not get this material on clothing. Provide adequate ventilation. Do not use in areas without adequate ventilation. Wear appropriate personal protective equipment. Observe good industrial hygiene practices. When using, do not eat, drink or smoke. Wash thoroughly after handling. Handle and open container with care. Avoid release to the environment. Do not empty into drains.
Conditions for safe storage, including any incompatibilities	CAUTION Keep locked-up. Keep locked up. Store in a place accessible by authorized persons only. Store in a cool, dry place out of direct sunlight. Keep containers tightly closed in a dry, cool and well-ventilated place. Keep this material away from food, drink and animal feed. Keep out of the reach of children.

8. Exposure controls/personal protection

Occupational exposure limits

Canada. Alberta OELs (Occupational Health & Safety Code, Schedule 1, Table 2)

Additional components	Type	Value	Form
INERT OR NUISANCE DUSTS	TWA	3 mg/m ³	Respirable particles.
		10 mg/m ³	Total particulate.

Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended)

Additional components	Type	Value	Form
INERT OR NUISANCE DUSTS	TWA	3 mg/m ³	Respirable fraction.
		10 mg/m ³	Total dust.

Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents)

Additional components	Type	Value	Form
INERT OR NUISANCE DUSTS	TWA	3 mg/m3	Respirable fraction.
		10 mg/m3	Inhalable fraction.

Canada. Quebec OELs. (Ministry of Labor - Regulation respecting occupational health and safety)

Additional components	Type	Value	Form
INERT OR NUISANCE DUSTS	TWA	10 mg/m3	Total dust.

Biological limit values	No biological exposure limits noted for the ingredient(s).
Exposure guidelines	No exposure standards allocated.
Appropriate engineering controls	Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level. Ensure adequate ventilation, especially in confined areas. General ventilation normally adequate. Eye wash facilities and emergency shower must be available when handling this product. Local exhaust is suggested for use, where possible, in enclosed or confined spaces.
Individual protection measures, such as personal protective equipment	
Eye/face protection	Wear safety glasses with side shields (or goggles) and a face shield. Face-shield. Chemical goggles are recommended. Do not get in eyes. Provide an emergency eye wash fountain and quick drench shower in the immediate work area. Wear safety glasses; chemical goggles (if splashing is possible).
Skin protection	
Hand protection	Wear appropriate chemical resistant gloves. Chemical resistant gloves. Wear protective gloves.
Other	Do not get this material in contact with skin. Do not get this material on clothing. Wear chemical protective equipment that is specifically recommended by the manufacturer. Where contact is likely, wear chemical-resistant gloves, a chemical suit, rubber boots, and chemical safety goggles plus a face shield. It may provide little or no thermal protection. Wear appropriate chemical resistant gloves. Structural firefighters protective clothing provides limited protection in fire situations ONLY; it is not effective in spill situations. Use of butyl rubber or nitrile gloves is recommended
Respiratory protection	No personal respiratory protective equipment normally required. Do not breathe dust/fume/gas/mist/vapors/spray. Wear positive pressure self-contained breathing apparatus (SCBA). If ventilation is not sufficient to effectively prevent buildup of aerosols or vapors, appropriate NIOSH/MSHA respiratory protection must be provided.
Thermal hazards	Wear appropriate thermal protective clothing, when necessary.
General hygiene considerations	When using, do not eat, drink or smoke. Do not get this material on clothing. When using do not eat or drink. Wash hands after handling. Keep away from food, drink and animal feeding stuffs. Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants. Contaminated work clothing should not be allowed out of the workplace. Use good industrial hygiene practices in handling this material.

9. Physical and chemical properties

Appearance	Powder.
Physical state	Solid.
Form	Solid. powder
Color	Dark violet.
Odor	None.
Odor threshold	Not available.
pH	1
Melting point/freezing point	552.94 °F (289.41 °C) estimated
Initial boiling point and boiling range	2669 °F (1465 °C) estimated
Flash point	Not available.
Evaporation rate	> 1

Flammability (solid, gas)	Not available.
Upper/lower flammability or explosive limits	
Flammability limit - lower (%)	Not available.
Flammability limit - upper (%)	Not available.
Explosive limit - lower (%)	Not available.
Explosive limit - upper (%)	Not available.
Vapor pressure	0.00001 hPa estimated
Vapor density	Not available.
Relative density	Not available.
Solubility(ies)	
Solubility (water)	Complete
Partition coefficient (n-octanol/water)	Not available.
Auto-ignition temperature	Not available.
Decomposition temperature	Not available.
Viscosity	Not available.
Other information	
Density	2.14 g/cm ³ estimated
Percent volatile	0 % estimated
Specific gravity	2.14 estimated

10. Stability and reactivity

Reactivity	The product is stable and non-reactive under normal conditions of use, storage and transport.
Chemical stability	Stable at normal conditions.
Possibility of hazardous reactions	Will not occur. Hazardous polymerization does not occur.
Conditions to avoid	Reacts violently with strong alkaline substances. This product may react with reducing agents. Do not mix with other chemicals. Contact with incompatible materials.
Incompatible materials	Strong oxidizing agents. This product may react with reducing agents. Incompatible with bases. May react with strong bases or oxidizing agents.
Hazardous decomposition products	Upon decomposition, this product may yield sulfur dioxide, carbon monoxide, carbon dioxide and/or low molecular weight hydrocarbons.

11. Toxicological information

Information on likely routes of exposure

Inhalation	Prolonged inhalation may be harmful. May cause irritation to the respiratory system. No adverse effects due to inhalation are expected.
Skin contact	Corrosive effects. Causes severe skin burns. May cause an allergic skin reaction. Frequent or prolonged contact may defat and dry the skin, leading to discomfort and dermatitis.
Eye contact	Causes severe eye burns. Causes serious eye damage.
Ingestion	Expected to be a low ingestion hazard. Causes digestive tract burns. Harmful if swallowed.

Symptoms related to the physical, chemical and toxicological characteristics Burning pain and severe corrosive skin damage. Contact with this material will cause burns to the skin, eyes and mucous membranes. Causes serious eye damage. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Permanent eye damage including blindness could result.

Information on toxicological effects

Acute toxicity Corrosive effects. Causes severe burns. Causes burns. Harmful if swallowed. May cause allergic skin reaction.

Product	Species	Test Results
DPA™		
Acute		
Dermal		
LD50	Rabbit	30930 mg/kg
Components	Species	Test Results
SODIUM DODECYLBENZENESULFONATE (CAS 25155-30-0)		
Acute		
Oral		
LD50	Rat	438 mg/kg
SULFAMIC ACID (CAS 5329-14-6)		
Acute		
Oral		
LD50	Rat	1450 mg/kg

* Estimates for product may be based on additional component data not shown.

Skin corrosion/irritation	Hazardous by OSHA criteria. Corrosive to skin and eyes. Causes severe skin burns and eye damage. Corrosive effects.
Serious eye damage/eye irritation	Causes severe eye burns. Causes serious eye damage.
Respiratory or skin sensitization	
Respiratory sensitization	Due to partial or complete lack of data the classification is not possible.
Skin sensitization	Causes severe skin burns. May cause an allergic skin reaction. Frequent or prolonged contact may defat and dry the skin, leading to discomfort and dermatitis. Due to partial or complete lack of data the classification is not possible. This product is not expected to cause skin sensitization.
Germ cell mutagenicity	No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic. Due to partial or complete lack of data the classification is not possible.
Carcinogenicity	Not listed by ACGIH, IARC, NIOSH, NTP OR OSHA. Due to partial or complete lack of data the classification is not possible.
Reproductive toxicity	Suspected of damaging fertility or the unborn child. Not classified. Due to partial or complete lack of data the classification is not possible. This product is not expected to cause reproductive or developmental effects.
Specific target organ toxicity - single exposure	Not classified. Due to partial or complete lack of data the classification is not possible.
Specific target organ toxicity - repeated exposure	Not classified. May cause damage to organs through prolonged or repeated exposure. Due to partial or complete lack of data the classification is not possible.
Aspiration hazard	Due to partial or complete lack of data the classification is not possible.
Chronic effects	Prolonged inhalation may be harmful. May cause damage to organs through prolonged or repeated exposure. Repeated or prolonged exposure may cause irritation of eyes and skin.

12. Ecological information

Ecotoxicity	Components of this product have been identified as having potential environmental concerns. Harmful to aquatic life with long lasting effects. Expected to be harmful to aquatic organisms. May cause long-term adverse effects in the environment. Accumulation in aquatic organisms is expected. Because of the low pH of this product, it would be expected to produce significant ecotoxicity upon exposure to aquatic organisms and aquatic systems.
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Components	Species	Test Results
SODIUM DODECYLBENZENESULFONATE (CAS 25155-30-0)		
Aquatic		
Crustacea	EC50	Water flea (Ceriodaphnia dubia) 3.26 - 14.51 mg/l, 48 hours
Fish	LC50	Fish 10.8 mg/L, 96 Hours
		Rainbow trout,donaldson trout (Oncorhynchus mykiss) 3.2 - 5.6 mg/l, 96 hours
SULFAMIC ACID (CAS 5329-14-6)		
Aquatic		
Fish	LC50	Fathead minnow (Pimephales promelas) 14.2 mg/l, 96 hours

Components	Species	Test Results
	Fish	70.3 mg/L, 96 Hours

* Estimates for product may be based on additional component data not shown.

Persistence and degradability No data is available on the degradability of this product.

Bioaccumulative potential No data available.

Partition coefficient n-octanol / water (log Kow)

SODIUM DODECYLBENZENESULFONATE 0.45

Mobility in soil No data available.

Other adverse effects No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.

13. Disposal considerations

Disposal instructions Consult authorities before disposal. Contract with a disposal operator licensed by the Law on Disposal and Cleaning. Collect and reclaim or dispose in sealed containers at licensed waste disposal site. This material and its container must be disposed of as hazardous waste. Incinerate the material under controlled conditions in an approved incinerator. Must be incinerated in a suitable incineration plant holding a permit delivered by the competent authorities. Do not allow this material to drain into sewers/water supplies. Do not contaminate ponds, waterways or ditches with chemical or used container. Dispose of contents/container in accordance with local/regional/national/international regulations. Dispose in accordance with all applicable regulations. Dispose of contents/container (in accordance with related regulations). When your own wastewater treatment plant is not available, collect entire waste and then charge to a licensed industrial waste management professional with manifests for industrial waste.

Local disposal regulations Dispose in accordance with all applicable regulations.

Hazardous waste code D002: Waste Corrosive material [pH <=2 or >=12.5, or corrosive to steel]
The waste code should be assigned in discussion between the user, the producer and the waste disposal company.

Waste from residues / unused products Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions). Avoid discharge into water courses or onto the ground. Not applicable.

Contaminated packaging Empty containers should be taken to an approved waste handling site for recycling or disposal. Since emptied containers may retain product residue, follow label warnings even after container is emptied.

14. Transport information

TDG

UN number UN2967

UN proper shipping name Sulfamic acid

Transport hazard class(es)

Class 8

Subsidiary risk -

Packing group III

Environmental hazards Not available.

Special precautions for user Read safety instructions, SDS and emergency procedures before handling.

IATA

UN number UN2967

UN proper shipping name Sulfamic acid

Transport hazard class(es)

Class 8

Subsidiary risk -

Label(s) 8

Packing group III

Environmental hazards No.

Special precautions for user Read safety instructions, SDS and emergency procedures before handling.

Other information

Passenger and cargo aircraft Allowed with restrictions.

Cargo aircraft only Allowed with restrictions.

IMDG

UN number UN2967

UN proper shipping name Sulfamic acid
Transport hazard class(es)
Class 8
Subsidiary risk -
Label(s) 8
Packing group III
Environmental hazards
Marine pollutant No.
EmS Not available.
Special precautions for user Read safety instructions, SDS and emergency procedures before handling.

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

IATA; IMDG; TDG



15. Regulatory information

Canadian regulations This product has been classified in accordance with the hazard criteria of the CPR and the SDS contains all the information required by the CPR.

Controlled Drugs and Substances Act

Not regulated.

Export Control List (CEPA 1999, Schedule 3)

Not listed.

Greenhouse Gases

Not listed.

Precursor Control Regulations

Not regulated.

International regulations The product is classified and labelled in accordance with EC directives or respective national laws. This Safety Data Sheet complies with the requirements of Regulation (EC) No 1907/2006. Young people under 18 years old are not allowed to work with this product according to EU Directive 94/33/EC on the protection of young people at work.

Stockholm Convention

Not applicable.

Rotterdam Convention

Not applicable.

Kyoto protocol

Not applicable.

Montreal Protocol

Not applicable.

Basel Convention

Not applicable.

International Inventories

Country(s) or region	Inventory name	On inventory (yes/no)*
Australia	Australian Inventory of Chemical Substances (AICS)	Yes
Canada	Domestic Substances List (DSL)	Yes
Canada	Non-Domestic Substances List (NDSL)	No
China	Inventory of Existing Chemical Substances in China (IECSC)	Yes

Country(s) or region	Inventory name	On inventory (yes/no)*
Europe	European Inventory of Existing Commercial Chemical Substances (EINECS)	No
Europe	European List of Notified Chemical Substances (ELINCS)	No
Japan	Inventory of Existing and New Chemical Substances (ENCS)	Yes
Korea	Existing Chemicals List (ECL)	Yes
New Zealand	New Zealand Inventory	Yes
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	Yes
Taiwan	Taiwan Chemical Substance Inventory (TCSI)	Yes
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

*A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s)

A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

16. Other information

Issue date	13-August-2018
Revision date	13-August-2018
Version #	11
Further information	This safety datasheet only contains information relating to safety and does not replace any product information or product specification. HMIS® is a registered trade and service mark of the NPCA.

References

ACGIH
EPA: AQUIRE database
NLM: Hazardous Substances Data Base
US. IARC Monographs on Occupational Exposures to Chemical Agents
Korea. Accidental Release Prevention Substances (Presidential Decree of Toxic Chemical Control Law, Executive Order No. 19203)
Korea. Dangerous Substances Threshold Quantity (Presidential Decree of Dangerous Substances Safety Management Act No. 18406, Schedule 1)
Korea. Harmful Substances Prohibited from Manufacturing (Presidential Decree on the Industrial Safety and Health Act (No. 13053), Article 29)
Korea. Harmful Substances Requiring Permission for Manufacture or Use (Presidential Decree on the Industrial Safety and Health Act (No. 13053), Article 30)
Korea. Non-Toxic Chemicals List (National Institute of Environment Research (NIER) Public Notice No. 1997-10, as amended)
Korea. Observational Chemicals (Ministerial Decree of TCCL Article 6)
Korea. OELs. Regulation for Permitted Concentration of Hazardous Substances (Ministry of Labor (MOL) Public Notice No. 1986-45, as amended)
Korea. Prohibited Chemical Substances (TCCL Article 11)
Korea. Regulated volatile organic compounds (VOCs) (MOE Notice No. 2001-36, March 8, 2001, as amended)
Korea. Restricted Chemical Substances (TCCL Article 11)
Korea. Toxic Chemical Control Law (TCCL), Existing Chemicals Inventory (KECI)
Korea. Toxic Chemical Control Law (TCCL), pre-1997 List
Korea. Toxic Chemicals (TCCL Article 10)
Korea. Toxic Release Inventory (TRI) Chemicals (TCCL Article 14)
Taiwan. Dangerous Materials (Rules on Hazard Communication of Dangerous Materials and Toxic Materials)
Taiwan. Industrial Precursor Chemicals (Categories and Regulations Governing Inspection and Declaration of Industrial Precursor Chemicals, MOEA Decree No. 87, as amended)
Taiwan. OELs. (Standards on Workplace Atmosphere of Dangerous and Hazardous Materials)
Taiwan. Toxic Chemical Substances (TCS) (List of Toxic Chemical Substances announced by the Environmental Protection Administration)
Taiwan. Toxic Materials (Rules on Hazard Communication of Dangerous Materials and Toxic Materials)
HSDB® - Hazardous Substances Data Bank
IARC Monographs. Overall Evaluation of Carcinogenicity
National Toxicology Program (NTP) Report on Carcinogens
ACGIH Documentation of the Threshold Limit Values and Biological Exposure Indices
Japan Society for Occupational Health, Recommendation of Occupational Exposure Limits
GOST 30333-2007 - Chemical production safety passport. General requirements
JIS Z 7252:2009 Classification of chemicals based on "Globally Harmonized System of Classification and Labelling of Chemicals (GHS)"
JIS Z 7253:2012 Hazard communication of chemicals based on GHS – Labelling and Safety Data Sheet (SDS)
Japan Chemical Industry Association (JCIA) GHS Guideline, June 2012

Disclaimer

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The manufacturer expressly does not make any representations, warranties, or guarantees as to its accuracy, reliability or completeness nor assumes any liability, for its use. It is the user's responsibility to verify the suitability and completeness of such information for each particular use.

Third party materials: Insofar as materials not manufactured or supplied by this manufacturer are used in conjunction with, or instead of this product, it is the responsibility of the customer to obtain, from the manufacturer or supplier, all technical data and other properties relating to these and other materials and to obtain all necessary information relating to them. No liability can be accepted in respect of the use of this product in conjunction with materials from another supplier. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text. This safety data sheet was prepared in accordance with JIS Z 7253:2012. Additional information is given in the Material Safety Data Sheet. The information in the sheet was written based on the best knowledge and experience currently available.

Revision information

Product and Company Identification: Alternate Trade Names
Transport Information: Material Transportation Information
GHS: Classification