

SAFETY DATA SHEET



Vazo™ 67

Version	Revision Date:	SDS Number:	Date of last issue: 2022/07/19
12.1	2022/10/18	1325302-00047	Date of first issue: 2017/02/27

1. PRODUCT AND COMPANY IDENTIFICATION

Product name : Vazo™ 67

SDS-Identcode : 130000000273

Manufacturer or supplier's details

Company : The Chemours Malaysia Sdn. Bhd.

Address : Sovereign Plaza, 21 st Floor, M17, Jl. T.B. Simatupang, Kav. 36
Jakarta 12430 Indonesia

Telephone : 021 2939 8815

Emergency telephone number : 001-803-017-9114 (toll free)

Telefax : 021 2939 8817

Recommended use of the chemical and restrictions on use

Recommended use : Intermediate

Restrictions on use : For industrial use only.



2. HAZARDS IDENTIFICATION

GHS Classification

Self-reactive substances and mixtures : Type D

Acute toxicity (Oral) : Category 4

GHS label elements

Hazard pictograms :  

Signal word : Danger

Hazard statements : H242 Heating may cause a fire.
H302 Harmful if swallowed.

Precautionary statements : **Prevention:**
P210 Keep away from heat/ sparks/ open flames/ hot surfaces.
No smoking.
P220 Keep/ Store away from clothing/ combustible materials.
P234 Keep only in original container.

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P264 Wash skin thoroughly after handling.
P270 Do not eat, drink or smoke when using this product.
P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.

Response:

P301 + P312 + P330 IF SWALLOWED: Call a POISON CENTER/ doctor if you feel unwell. Rinse mouth.

Storage:

P403 + P235 Store in a well-ventilated place. Keep cool.
P411 Store at temperatures not exceeding 24 °C/ 75 °F.
P420 Store away from other materials.

Disposal:

P501 Dispose of contents/ container to an approved waste disposal plant.

Other hazards which do not result in classification

Risk of explosion if heated under confinement.
Dust contact with the eyes can lead to mechanical irritation.
Contact with dust can cause mechanical irritation or drying of the skin.
May form explosive dust-air mixture.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Substance
Substance name : 2,2'-Azodi(2-methylbutyronitrile)
CAS-No. : 13472-08-7

Components

Chemical name	CAS-No.	Concentration (% w/w)
2,2'-Azodi(2-methylbutyronitrile)	13472-08-7	>= 60 -<= 100

4. FIRST AID MEASURES

General advice : In the case of accident or if you feel unwell, seek medical advice immediately.
When symptoms persist or in all cases of doubt seek medical advice.

If inhaled : If inhaled, remove to fresh air.
Get medical attention if symptoms occur.

In case of skin contact : Wash with water and soap.
Get medical attention if symptoms occur.

In case of eye contact : If in eyes, rinse well with water.
Get medical attention if irritation develops and persists.

If swallowed : If swallowed, DO NOT induce vomiting unless directed to do

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- so by medical personnel.
Get medical attention.
Rinse mouth thoroughly with water.
Never give anything by mouth to an unconscious person.
- Most important symptoms and effects, both acute and delayed : Eye contact may provoke the following symptoms
Irritation
Pain
tearing
Impairment of vision
Ingestion may provoke the following symptoms:
Tremors
Lack of coordination
Lethargy
central nervous system effects
Harmful if swallowed.
Contact with dust can cause mechanical irritation or drying of the skin.
Dust contact with the eyes can lead to mechanical irritation.
- Protection of first-aiders : First Aid responders should pay attention to self-protection, and use the recommended personal protective equipment when the potential for exposure exists (see section 8).
- Notes to physician : Treat symptomatically and supportively.

5. FIREFIGHTING MEASURES

- Suitable extinguishing media : Water spray
Alcohol-resistant foam
- Unsuitable extinguishing media : High volume water jet
- Specific hazards during fire-fighting : Avoid generating dust; fine dust dispersed in air in sufficient concentrations, and in the presence of an ignition source is a potential dust explosion hazard.
Do not use a solid water stream as it may scatter and spread fire.
The product burns violently.
Exposure to combustion products may be a hazard to health.
- Hazardous combustion products : Nitrogen oxides (NOx)
Carbon oxides
- Specific extinguishing methods : Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
Use water spray to cool unopened containers.
Remove undamaged containers from fire area if it is safe to do so.
Evacuate area.
- Special protective equipment for firefighters : In the event of fire, wear self-contained breathing apparatus.
Use personal protective equipment.

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6. ACCIDENTAL RELEASE MEASURES

- Personal precautions, protective equipment and emergency procedures : Remove all sources of ignition.
Use personal protective equipment.
Follow safe handling advice (see section 7) and personal protective equipment recommendations (see section 8).
- Environmental precautions : Avoid release to the environment.
Prevent further leakage or spillage if safe to do so.
Retain and dispose of contaminated wash water.
Local authorities should be advised if significant spillages cannot be contained.
- Methods and materials for containment and cleaning up : Clear spills immediately.
Take any precaution to avoid mixing with combustibles.
Soak up with inert absorbent material.
Remove mechanically and with care (e.g. with clean polyethylene plastic shovel).
Avoid dispersal of dust in the air (i.e., clearing dust surfaces with compressed air).
Dust deposits should not be allowed to accumulate on surfaces, as these may form an explosive mixture if they are released into the atmosphere in sufficient concentration.
Isolate waste and do not reuse.
Local or national regulations may apply to releases and disposal of this material, as well as those materials and items employed in the cleanup of releases. You will need to determine which regulations are applicable.
Sections 13 and 15 of this SDS provide information regarding certain local or national requirements.

7. HANDLING AND STORAGE

- Technical measures : Static electricity may accumulate and ignite suspended dust causing an explosion.
Provide adequate precautions, such as electrical grounding and bonding, or inert atmospheres.
- Local/Total ventilation : Use only with adequate ventilation.
If advised by assessment of the local exposure potential, use only in an area equipped with explosion-proof exhaust ventilation.
- Advice on safe handling : Do not breathe decomposition products.

Do not breathe dust.
Do not swallow.
Avoid contact with eyes.
Avoid prolonged or repeated contact with skin.
Wash skin thoroughly after handling.
Handle in accordance with good industrial hygiene and safety practice, based on the results of the workplace exposure as-

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assessment
Non-sparking tools should be used.
Prevent pressure build-up
Protect container from physical shock.
Protect from contamination.
Minimize dust generation and accumulation.
Keep container closed when not in use.
Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
Keep away from clothing and other combustible materials.
Take precautionary measures against static discharges.
Do not eat, drink or smoke when using this product.
Keep only in original packaging.
Take care to prevent spills, waste and minimize release to the environment.

Conditions for safe storage : Keep in properly labelled containers.
Store in original container.
Keep in a dry, cool and well-ventilated place.
Protect from sunlight.
Adhere to recommended storage temperature.
Store in accordance with the particular national regulations.
Keep away from heat and sources of ignition.

Materials to avoid : Do not store with the following product types:
Oxidizing agents
Flammable gases
Flammable liquids
Flammable solids
Pyrophoric liquids
Pyrophoric solids
Self-heating substances and mixtures
Substances and mixtures, which in contact with water, emit flammable gases
Poisonous gases
Explosives
Corrosive Substances

Recommended storage temperature : < 24 °C

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Components with workplace control parameters

Contains no substances with occupational exposure limit values.

Occupational exposure limits of decomposition products

Components	CAS-No.	Value type (Form of exposure)	Control parameters / Permissible concentration	Basis
Hydrogen cyanide	74-90-8	KTD	4.7 ppm (Cyanide)	ID OEL

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Further information: Skin				
		C	4.7 ppm (Cyanide)	ACGIH
Carbon monoxide	630-08-0	NAB	25 ppm 29 mg/m3	ID OEL
		TWA	25 ppm	ACGIH
Carbon dioxide	124-38-9	NAB	5,000 ppm 9,000 mg/m3	ID OEL
		PSD	30,000 ppm 54,000 mg/m3	ID OEL
		TWA	5,000 ppm	ACGIH
		STEL	30,000 ppm	ACGIH

Engineering measures : Processing may form hazardous compounds (see section 10).
Ensure adequate ventilation, especially in confined areas.
Minimize workplace exposure concentrations.
Apply measures to prevent dust explosions.
Ensure that dust-handling systems (such as exhaust ducts, dust collectors, vessels, and processing equipment) are designed in a manner to prevent the escape of dust into the work area (i.e., there is no leakage from the equipment).
If advised by assessment of the local exposure potential, use only in an area equipped with explosion-proof exhaust ventilation.

Personal protective equipment

Respiratory protection : If adequate local exhaust ventilation is not available or exposure assessment demonstrates exposures outside the recommended guidelines, use respiratory protection.

Filter type : Self-contained breathing apparatus

Hand protection
Material : Neoprene

Remarks : Choose gloves to protect hands against chemicals depending on the concentration and quantity of the hazardous substance and specific to place of work. For special applications, we recommend clarifying the resistance to chemicals of the aforementioned protective gloves with the glove manufacturer. Wash hands before breaks and at the end of workday. Breakthrough time is not determined for the product. Change gloves often!

Eye protection : Wear the following personal protective equipment:
Safety goggles

Skin and body protection : Select appropriate protective clothing based on chemical resistance data and an assessment of the local exposure potential.
Wear the following personal protective equipment:
If assessment demonstrates that there is a risk of explosive

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atmospheres or flash fires, use flame retardant antistatic protective clothing.
Skin contact must be avoided by using impervious protective clothing (gloves, aprons, boots, etc).

Hygiene measures : If exposure to chemical is likely during typical use, provide eye flushing systems and safety showers close to the working place.
When using do not eat, drink or smoke.
Wash contaminated clothing before re-use.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	: solid, crystalline
Colour	: white
Odour	: odourless
Odour Threshold	: No data available
pH	: 7
Melting point/freezing point	: 49.4 °C Do not attempt to verify melting point; decomposition can be violent.
Initial boiling point and boiling range	: No data available
Flash point	: Not applicable
Evaporation rate	: Not applicable
Flammability (solid, gas)	: May form explosive dust-air mixture.
Upper explosion limit / Upper flammability limit	: No data available
Lower explosion limit / Lower flammability limit	: 0.03 - 0.04 %(V)
Vapour pressure	: 0.00354 hPa (25 °C)
Relative vapour density	: Not applicable
Relative density	: 1.1 (25 °C)
Bulk density	: 400 kg/m³

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Solubility(ies)	
Water solubility	: < 10 g/l
Partition coefficient: n-octanol/water	: log Pow: 2.07 (20 °C)
Auto-ignition temperature	: 185 °C
Decomposition temperature	: The product is a self-reactive substance or mixture classified as type D.
Self-Accelerating decomposition temperature (SADT)	: 45 °C
Viscosity	
Viscosity, kinematic	: Not applicable
Explosive properties	: Extreme risk of explosion by shock, friction, fire or other sources of ignition.
Oxidizing properties	: The substance or mixture is not classified as oxidizing.
Particle size	: No data available

10. STABILITY AND REACTIVITY

Reactivity	: Heating may cause a fire.
Chemical stability	: Follow precautionary advice and avoid incompatible materials and conditions
Possibility of hazardous reactions	: May form explosive dust-air mixture. Oxidizing material can cause a reaction. Hazardous decomposition products will be formed at elevated temperatures. May explode under confinement.
Conditions to avoid	: Heat, flames and sparks. Protect from contamination. Avoid dust formation. Temperatures greater than recommended storage temperature. Contact with incompatible substances can cause decomposition at or below SADT.
Incompatible materials	: Oxidizing agents Avoid impurities (e.g. rust, dust, ash), risk of decomposition. Flammable materials

Hazardous decomposition products

Thermal decomposition	: Hydrogen cyanide Nitrogen Carbon monoxide
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Carbon dioxide

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure :
Inhalation
Skin contact
Ingestion
Eye contact

Acute toxicity

Harmful if swallowed.

Product:

Acute oral toxicity : Acute toxicity estimate: 338.35 mg/kg
Method: Calculation method

Components:

2,2'-Azodi(2-methylbutyronitrile):

Acute oral toxicity : LD50 (Rat): 337 mg/kg
Method: OECD Test Guideline 401

Acute inhalation toxicity : LC50 (Rat): > 8.9 mg/l
Exposure time: 4 h
Test atmosphere: dust/mist
Method: OECD Test Guideline 403
Assessment: The substance or mixture has no acute inhalation toxicity

Acute dermal toxicity : LD50 (Rat): > 2,000 mg/kg
Method: OECD Test Guideline 402
Assessment: The substance or mixture has no acute dermal toxicity
Remarks: Based on data from similar materials

Skin corrosion/irritation

Not classified based on available information.

Components:

2,2'-Azodi(2-methylbutyronitrile):

Species : Rabbit
Method : OECD Test Guideline 404
Result : No skin irritation

Serious eye damage/eye irritation

Not classified based on available information.

Components:

2,2'-Azodi(2-methylbutyronitrile):

Species : Rabbit

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Result	:	No eye irritation
Method	:	OECD Test Guideline 405

Respiratory or skin sensitisation

Skin sensitisation

Not classified based on available information.

Respiratory sensitisation

Not classified based on available information.

Components:

2,2'-Azodi(2-methylbutyronitrile):

Test Type	:	Maximisation Test
Exposure routes	:	Skin contact
Species	:	Guinea pig
Method	:	OECD Test Guideline 406
Result	:	negative
Test Type	:	Local lymph node assay (LLNA)
Exposure routes	:	Skin contact
Species	:	Mouse
Method	:	OECD Test Guideline 429
Result	:	negative
Remarks	:	Based on data from similar materials

Germ cell mutagenicity

Not classified based on available information.

Components:

2,2'-Azodi(2-methylbutyronitrile):

Genotoxicity in vitro	:	Test Type: Bacterial reverse mutation assay (AMES) Method: OECD Test Guideline 471 Result: negative Remarks: Based on data from similar materials
		Test Type: In vitro mammalian cell gene mutation test Method: OECD Test Guideline 476 Result: negative Remarks: Based on data from similar materials
		Test Type: Chromosome aberration test in vitro Method: OECD Test Guideline 473 Result: negative Remarks: Based on data from similar materials
Germ cell mutagenicity - Assessment	:	Weight of evidence does not support classification as a germ cell mutagen.

Carcinogenicity

Not classified based on available information.

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Reproductive toxicity

Not classified based on available information.

STOT - single exposure

Not classified based on available information.

Components:

2,2'-Azodi(2-methylbutyronitrile):

Exposure routes	: Ingestion
Assessment	: No significant health effects observed in animals at concentrations of 2000 mg/kg bw or less
Exposure routes	: inhalation (dust/mist/fume)
Assessment	: No significant health effects observed in animals at concentrations of 5.0 mg/l/4h or less
Exposure routes	: Skin contact
Assessment	: No significant health effects observed in animals at concentrations of 2000 mg/kg bw or less

STOT - repeated exposure

Not classified based on available information.

Components:

2,2'-Azodi(2-methylbutyronitrile):

Exposure routes	: Ingestion
Assessment	: No significant health effects observed in animals at concentrations of 100 mg/kg bw or less.

Repeated dose toxicity

Components:

2,2'-Azodi(2-methylbutyronitrile):

Species	: Rat, male and female
NOAEL	: 10 mg/kg
LOAEL	: 50 mg/kg
Application Route	: Ingestion
Exposure time	: 42 Days
Method	: OECD Test Guideline 422
Remarks	: Based on data from similar materials

Aspiration toxicity

Not classified based on available information.

12. ECOLOGICAL INFORMATION

Ecotoxicity

Components:

2,2'-Azodi(2-methylbutyronitrile):

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- | | | |
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| Toxicity to fish | : | LC50 (Danio rerio (zebra fish)): 580 mg/l
Exposure time: 96 h
Method: OECD Test Guideline 203
Remarks: Based on data from similar materials |
| Toxicity to daphnia and other aquatic invertebrates | : | EC50 (Daphnia magna (Water flea)): 51.9 mg/l
Exposure time: 48 h
Method: OECD Test Guideline 202 |
| Toxicity to algae/aquatic plants | : | EC50 (Pseudokirchneriella subcapitata (green algae)): 67 mg/l
Exposure time: 72 h
Method: OECD Test Guideline 201

NOEC (Pseudokirchneriella subcapitata (green algae)): 12.5 mg/l
Exposure time: 3 d
Method: OECD Test Guideline 201 |
| Toxicity to fish (Chronic toxicity) | : | NOEC (Oryzias latipes (Japanese medaka)): > 10 mg/l
Exposure time: 14 d
Method: OECD Test Guideline 204
Remarks: Based on data from similar materials |
| Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) | : | NOEC (Daphnia magna (Water flea)): 2.2 mg/l
Exposure time: 21 d
Method: OECD Test Guideline 211
Remarks: Based on data from similar materials |

Persistence and degradability

Components:

2,2'-Azodi(2-methylbutyronitrile):

- | | | |
|------------------|---|---|
| Biodegradability | : | Result: Not readily biodegradable.
Method: OECD Test Guideline 301D
Remarks: Based on data from similar materials |
|------------------|---|---|

Bioaccumulative potential

Components:

2,2'-Azodi(2-methylbutyronitrile):

- | | | |
|-----------------|---|---------------------------------------|
| Bioaccumulation | : | Remarks: Bioaccumulation is unlikely. |
|-----------------|---|---------------------------------------|

Mobility in soil

No data available

Other adverse effects

No data available

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13. DISPOSAL CONSIDERATIONS

Disposal methods

Waste from residues : Dispose of in accordance with local regulations.

Contaminated packaging : Empty containers should be taken to an approved waste handling site for recycling or disposal.
If not otherwise specified: Dispose of as unused product.

14. TRANSPORT INFORMATION

International Regulations

UNRTDG

UN number : UN 3236

Proper shipping name : SELF-REACTIVE SOLID TYPE D, TEMPERATURE CONTROLLED (2,2'-AZODI(2-METHYLBUTYRONITRILE))

Class : 4.1

Packing group : Not assigned by regulation

Labels : 4.1

IATA-DGR

Not permitted for transport

IMDG-Code

UN number : UN 3236

Proper shipping name : SELF-REACTIVE SOLID TYPE D, TEMPERATURE CONTROLLED (2,2'-AZODI(2-METHYLBUTYRONITRILE))

Class : 4.1

Packing group : Not assigned by regulation

Labels : 4.1

EmS Code : F-F, S-K

Marine pollutant : no

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

Not applicable for product as supplied.

Special precautions for user

The transport classification(s) provided herein are for informational purposes only, and solely based upon the properties of the unpackaged material as it is described within this Safety Data Sheet. Transportation classifications may vary by mode of transportation, package sizes, and variations in regional or country regulations.

15. REGULATORY INFORMATION

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

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Minister of Industry Regulation No. 23/M-IND/PER/4/2013 concerning the Revision of Minister of Industry Regulation No. 87/M-IND/PER/9/2009 concerning Globally Harmonized System of Classification and Labelling of Chemicals.

Regulation of the Minister of Health No. 472 of 1996 on the Safeguarding of Substances Hazardous to Health

Hazardous substances that must be registered : Not applicable

Government Regulation No. 74 of 2001 on the Management of Hazardous and Toxic Substances

Hazardous substances approved for use : Not applicable

Prohibited substances : Not applicable

Restricted substances : Not applicable

Regulation of the Minister of Trade No. 44 of 2009 on Procurement, Distribution and Supervision of Hazardous Materials

Type of Hazardous Materials Restricted to Import, Distribution and Supervision : 2,2'-Azodi(2-methylbutyronitrile)

16. OTHER INFORMATION

Revision Date : 2022/10/18
Other information : Vazo™ and any associated logos are trademarks or copyrights of The Chemours Company FC, LLC.
Chemours™ and the Chemours Logo are trademarks of The Chemours Company.
Before use read Chemours safety information.
For further information contact the local Chemours office or nominated distributors.
Samples of 100 grams or less per package may ship as UN3226 without temperature control per CA-1998100007.

Further information

Sources of key data used to compile the Safety Data Sheet : Internal technical data, data from raw material SDSs, OECD eChem Portal search results and European Chemicals Agency, <http://echa.europa.eu/>

Date format : yyyy/mm/dd

Full text of other abbreviations

ACGIH : USA. ACGIH Threshold Limit Values (TLV)
ID OEL : Indonesia. Occupational Exposure Limits

ACGIH / TWA : 8-hour, time-weighted average
ACGIH / STEL : Short-term exposure limit
ACGIH / C : Ceiling limit
ID OEL / NAB : Long term exposure limit
ID OEL / PSD : Short term exposure limit

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ID OEL / KTD : Ceiling

AIIC - Australian Inventory of Industrial Chemicals; ANTT - National Agency for Transport by Land of Brazil; ASTM - American Society for the Testing of Materials; bw - Body weight; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DSL - Domestic Substances List (Canada); ECx - Concentration associated with x% response; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate response; ERG - Emergency Response Guide; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organisation for Standardization; KECI - Korea Existing Chemicals Inventory; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; n.o.s. - Not Otherwise Specified; Nch - Chilean Norm; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NOM - Official Mexican Norm; NTP - National Toxicology Program; NZIoC - New Zealand Inventory of Chemicals; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; SADT - Self-Accelerating Decomposition Temperature; SDS - Safety Data Sheet; TCSI - Taiwan Chemical Substance Inventory; TDG - Transportation of Dangerous Goods; TECI - Thailand Existing Chemicals Inventory; TSCA - Toxic Substances Control Act (United States); UN - United Nations; UNRTDG - United Nations Recommendations on the Transport of Dangerous Goods; vPvB - Very Persistent and Very Bioaccumulative; WHMIS - Workplace Hazardous Materials Information System

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 is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and shall not be considered a warranty or quality specification of any type. The information provided relates only to the specific material identified at the top of this SDS and may not be valid when the SDS material is used in combination with any other materials or in any process, unless specified in the text. Material users should review the information and recommendations in the specific context of their intended manner of handling, use, processing and storage, including an assessment of the appropriateness of the SDS material in the user's end product, if applicable.

ID / EN