

SAFETY DATA SHEET

according to the Globally Harmonized System



Vazo™ 52G

Version	Revision Date:	SDS Number:	Date of last issue: 12.01.2024
3.3	07.05.2025	5245348-00011	Date of first issue: 01.11.2019

1. PRODUCT AND COMPANY IDENTIFICATION

Product name : Vazo™ 52G

SDS-Identcode : 130000030497

Manufacturer or supplier's details

Company : The Chemours India Private Limited

Address : Gala Impecca, 1st Floor, Opposite Sangam Big Cinema, Andheri Kurla Road, Chakala, Andheri East, Maharashtra
Mumbai – 400069 India

Telephone : 91 22 6227 3300

Emergency telephone number : 000 800 100 7141 (Chemtrec) or 91 22 6227 3300

Recommended use of the chemical and restrictions on use

Recommended use : Intermediate

Restrictions on use : For industrial use only.

2. HAZARDS IDENTIFICATION

Manufacture, Storage and Import of Hazardous Chemicals Rules 1989

Classification

Not classified as hazardous according to criteria laid down in Part I of Schedule-1.

GHS Classification

Self-reactive substances and mixtures : Type D

Skin sensitisation : Sub-category 1A

Short-term (acute) aquatic hazard : Category 2

Long-term (chronic) aquatic hazard : Category 2

GHS label elements

Hazard pictograms :



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Signal word : Danger

Hazard statements : H242 Heating may cause a fire.
H317 May cause an allergic skin reaction.
H411 Toxic to aquatic life with long lasting effects.

Precautionary statements : **Prevention:**
P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P234 Keep only in original packaging.
P261 Avoid breathing dust/ fume/ gas/ mist/ vapours/ spray.
P272 Contaminated work clothing should not be allowed out of the workplace.
P273 Avoid release to the environment.
P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.

Response:
P302 + P352 IF ON SKIN: Wash with plenty of water.
P333 + P317 If skin irritation or rash occurs: Get medical help.
P362 + P364 Take off contaminated clothing and wash it before reuse.
P391 Collect spillage.

Storage:
P403 Store in a well-ventilated place.
P411 Store at temperatures not exceeding 10 °C/ 50 °F.
P420 Store separately.

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[2,4-Dimethylvaleronitrile]

CAS-No. : 4419-11-8

Components

Chemical name	CAS-No.	Concentration (% w/w)
2,2'-Azodi[2,4-Dimethylvaleronitrile]	4419-11-8	>= 90 - <= 100

4. FIRST AID MEASURES

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- | | |
|---|--|
| 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 | : In case of contact, immediately flush skin with soap and plenty of water.
Remove contaminated clothing and shoes.
Get medical attention.
Wash clothing before reuse.
Thoroughly clean shoes before reuse. |
| 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.
Get medical attention if symptoms occur.
Rinse mouth thoroughly with water. |
| Most important symptoms and effects, both acute and delayed | : Skin contact may provoke the following symptoms:
Discomfort
Itching
Redness
Swelling of tissue
Eye contact may provoke the following symptoms
Irritation
tearing
Redness
Discomfort
Ingestion may provoke the following symptoms:
Gastrointestinal disturbance
Contact with dust can cause mechanical irritation or drying of the skin.
Dust contact with the eyes can lead to mechanical irritation.
May cause an allergic skin reaction. |
| 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 |

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- 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 (NO_x)
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.

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.

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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 get on skin or clothing.
Avoid breathing dust, fume, gas, mist, vapours or spray.
Do not swallow.
Avoid contact with eyes.
Handle in accordance with good industrial hygiene and safety practice, based on the results of the workplace exposure assessment
Non-sparking tools should be used.
Prevent pressure build-up
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.
Take precautionary measures against static discharges.
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.
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.
- Store in original container.
- 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

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Explosives
Corrosive Substances

Recommended storage temperature : < 10 °C

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Components with workplace control parameters

Components	CAS-No.	Value type (Form of exposure)	Control parameters / Permissible concentration	Basis
2,2'-Azodi[2,4-Dimethylvaleronitrile]	4419-11-8	TWA	5 mg/m ³ (Cyanide)	IN OEL
Further information: Potential contribution to the overall exposure by the cutaneous route including mucous membranes and eye.				

Occupational exposure limits of decomposition products

Components	CAS-No.	Value type (Form of exposure)	Control parameters / Permissible concentration	Basis
Hydrogen cyanide	74-90-8	CEIL	10 ppm 10 mg/m ³	IN OEL
Further information: Potential contribution to the overall exposure by the cutaneous route including mucous membranes and eye.				
		C	4.7 ppm (Cyanide)	ACGIH
Carbon monoxide	630-08-0	TWA	50 ppm 55 mg/m ³	IN OEL
		STEL	400 ppm 440 mg/m ³	IN OEL
		TWA	25 ppm	ACGIH
Carbon dioxide	124-38-9	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 rec-

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ommended guidelines, use respiratory protection.

Filter type : Self-contained breathing apparatus

Hand protection

Material : Chemical-resistant gloves

Remarks : Choose gloves to protect hands against chemicals depending on the concentration and quantity of the hazardous substance and specific to place of work. Breakthrough time is not determined for the product. Change gloves often! 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.

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 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.
Contaminated work clothing should not be allowed out of the workplace.
Wash contaminated clothing before re-use.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance : solid

Colour : white

Odour : odourless

Odour Threshold : No data available

pH : 7

Melting point/freezing point : > 50 °C

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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 : 0
(Butyl Acetate=1.0)

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 %(V)

Vapour pressure : Not applicable

Relative vapour density : Not applicable

Relative density : 0.969

Bulk density : 400 kg/m³

Solubility(ies)
Water solubility : ≥ 0.00937 g/l (20 °C)

Partition coefficient: n-octanol/water : log Pow: 3.319 (20 °C)

Auto-ignition temperature : 225 °C

Decomposition temperature : The product is a self-reactive substance or mixture classified as type D.

Self-Accelerating decomposition temperature (SADT) : 25 °C

Viscosity
Viscosity, kinematic : Not applicable

Explosive properties : Not explosive

Oxidizing properties : The substance or mixture is not classified as oxidizing.

Particle characteristics
Particle size : No data available

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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
Carbon dioxide

11. TOXICOLOGICAL INFORMATION

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

Acute toxicity

Not classified based on available information.

Components:

2,2'-Azodi[2,4-Dimethylvaleronitrile]:

- Acute oral toxicity : LD50 (Mouse): > 6,000 mg/kg
Method: Expert judgement
- Acute inhalation toxicity : Approximate Lethal Concentration (Rat): 9.3 mg/l
Exposure time: 4 h
Test atmosphere: dust/mist
Method: OECD Test Guideline 403
Assessment: The substance or mixture has no acute inhala-

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tion toxicity

Skin corrosion/irritation

Not classified based on available information.

Components:

2,2'-Azodi[2,4-Dimethylvaleronitrile]:

Species	:	Tissue Culture
Method	:	OECD Test Guideline 439
Result	:	No skin irritation

Serious eye damage/eye irritation

Not classified based on available information.

Components:

2,2'-Azodi[2,4-Dimethylvaleronitrile]:

Species	:	Bovine cornea
Method	:	OECD Test Guideline 437
Result	:	No eye irritation

Species	:	Not tested on animals
Method	:	OECD Test Guideline 492
Result	:	No eye irritation

Respiratory or skin sensitisation

Skin sensitisation

May cause an allergic skin reaction.

Respiratory sensitisation

Not classified based on available information.

Product:

Assessment	:	Probability or evidence of high skin sensitisation rate in humans
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Components:

2,2'-Azodi[2,4-Dimethylvaleronitrile]:

Test Type	:	Direct Peptide Reactivity Assay (DPRA)
Exposure routes	:	Skin contact
Species	:	Not tested on animals
Method	:	OECD Test Guideline 442C
Result	:	positive

Test Type	:	KeratinoSens assay
Exposure routes	:	Skin contact
Species	:	Tissue Culture
Method	:	OECD Test Guideline 442D
Result	:	positive

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Assessment : Probability or evidence of high skin sensitisation rate in humans

Germ cell mutagenicity

Not classified based on available information.

Components:

2,2'-Azodi[2,4-Dimethylvaleronitrile]:

Genotoxicity in vitro : Test Type: Bacterial reverse mutation assay (AMES)
Method: OECD Test Guideline 471
Result: negative

Test Type: in vitro micronucleus test
Method: OECD Test Guideline 487
Result: negative

Germ cell mutagenicity - Assessment : Weight of evidence does not support classification as a germ cell mutagen.

Carcinogenicity

Not classified based on available information.

Reproductive toxicity

Not classified based on available information.

Components:

2,2'-Azodi[2,4-Dimethylvaleronitrile]:

Effects on fertility : Test Type: Reproduction/Developmental toxicity screening test
Species: Rat
Application Route: Ingestion
Method: OECD Test Guideline 422
Result: negative

Effects on foetal development : Test Type: Reproduction/Developmental toxicity screening test
Species: Rat
Application Route: Ingestion
Method: OECD Test Guideline 422
Result: negative

Reproductive toxicity - Assessment : Weight of evidence does not support classification for reproductive toxicity

STOT - single exposure

Not classified based on available information.

STOT - repeated exposure

Not classified based on available information.

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Components:

2,2'-Azodi[2,4-Dimethylvaleronitrile]:

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[2,4-Dimethylvaleronitrile]:

Species	: Rat, male and female
NOAEL	: 250 mg/kg
LOAEL	: > 250 mg/kg
Application Route	: Ingestion
Exposure time	: 8 Weeks
Method	: OECD Test Guideline 422

Aspiration toxicity

Not classified based on available information.

Components:

2,2'-Azodi[2,4-Dimethylvaleronitrile]:

No aspiration toxicity classification

12. ECOLOGICAL INFORMATION

Ecotoxicity

Components:

2,2'-Azodi[2,4-Dimethylvaleronitrile]:

Toxicity to fish	: LC50 (Danio rerio (zebra fish)): 2.11 mg/l Exposure time: 96 h Method: OECD Test Guideline 203
Toxicity to daphnia and other aquatic invertebrates	: EC50 (Daphnia magna (Water flea)): 1.17 mg/l Exposure time: 48 h Method: OECD Test Guideline 202
Toxicity to algae/aquatic plants	: EC50 (Desmodesmus subspicatus (green algae)): 1.48 mg/l Exposure time: 72 h Method: OECD Test Guideline 201
	NOEC (Desmodesmus subspicatus (green algae)): 1.19 mg/l Exposure time: 72 h Method: OECD Test Guideline 201

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Persistence and degradability

Components:

2,2'-Azodi[2,4-Dimethylvaleronitrile]:

Biodegradability : Result: Not readily biodegradable.
Method: OECD Test Guideline 301B

Bioaccumulative potential

Components:

2,2'-Azodi[2,4-Dimethylvaleronitrile]:

Partition coefficient: n-octanol/water : log Pow: 3.319 (25 °C)

Mobility in soil

No data available

Other adverse effects

No data available

13. DISPOSAL CONSIDERATIONS

Disposal methods

Waste from residues : Do not dispose of waste into sewer.
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(2,4-DIMETHYL-VALERONITRILE))

Class : 4.1
Packing group : Not assigned by regulation
Labels : 4.1
Environmentally hazardous : no

IATA-DGR

Not permitted for transport

IMDG-Code

UN number : UN 3236
Proper shipping name : SELF-REACTIVE SOLID TYPE D, TEMPERATURE

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CONTROLLED (2,2'-AZODI(2,4-DIMETHYLVALERONITRILE))
(2,2'-Azodi[2,4-Dimethylvaleronitrile])

Class	:	4.1
Packing group	:	Not assigned by regulation
Labels	:	4.1
EmS Code	:	F-F, S-K
Marine pollutant	:	yes

Transport in bulk according to IMO instruments

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

16. OTHER INFORMATION

Revision Date : 07.05.2025

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.

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 : dd.mm.yyyy

Full text of other abbreviations

ACGIH : USA. ACGIH Threshold Limit Values (TLV)
IN OEL : India. Permissible levels of certain chemical substances in work environment.

ACGIH / TWA : 8-hour, time-weighted average
ACGIH / STEL : Short-term exposure limit
ACGIH / C : Ceiling limit
IN OEL / TWA : Time-Weighted Average Concentration (TWA) (8 hrs.)
IN OEL / STEL : Short-term exposure Limit STEL (15 min)
IN OEL / CEIL : ceiling limit

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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.

IN / EN