

# Safety Data Sheet

## Dry Vitamin A-Palmitate 500

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(30041047/SDS\_GEN\_US/EN)

### 1. Identification

#### Product identifier used on the label

## Dry Vitamin A-Palmitate 500

#### Recommended use of the chemical and restriction on use

Recommended use\*: Vitamin

Unsuitable for use: Not intended for sale to or use by the general public.

\* The "Recommended use" identified for this product is provided solely to comply with a Federal requirement and is not part of the seller's published specification. The terms of this Safety Data Sheet (SDS) do not create or infer any warranty, express or implied, including by incorporation into or reference in the seller's sales agreement.

#### Details of the supplier of the safety data sheet

##### Company:

BASF CORPORATION  
100 Park Avenue  
Florham Park, NJ 07932, USA

Telephone: +1 973 245-6000

#### Emergency telephone number

##### 24 Hour Emergency Response Information

CHEMTREC: 1-800-424-9300

BASF HOTLINE: 1-800-832-HELP (4357)

#### Other means of identification

Synonyms:

Preparation based on: Retinyl palmitate 500 000 I.U./g, embedded in: carbohydrates, Gelatins, stabilized with: 2,6-di-tert-Butyl-p-cresol

### 2. Hazards Identification

#### According to Regulation 2024 OSHA Hazard Communication Standard; 29 CFR Part 1910.1200

#### Classification of the product

Combustible Dust	Combustible Dust (1)	Combustible Dust
Aquatic Chronic	2	Hazardous to the aquatic environment - chronic
Repr.	1B (unborn child)	Reproductive toxicity
Aquatic Acute	2	Hazardous to the aquatic environment - acute

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### Label elements

Pictogram:



Signal Word:  
Danger

Hazard Statement:

H360	May form combustible dust concentration in air.
H401	May damage the unborn child.
H411	Toxic to aquatic life.
	Toxic to aquatic life with long lasting effects.

Precautionary Statements (Prevention):

P273	Avoid release to the environment.
P280	Wear protective gloves, protective clothing and eye protection or face protection.
P201	Obtain special instructions before use.
P202	Do not handle until all safety precautions have been read and understood.

Precautionary Statements (Response):

P308 + P313	IF exposed or concerned: Get medical attention.
P391	Collect spillage.

Precautionary Statements (Storage):

P405	Store locked up.
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Precautionary Statements (Disposal):

P501	Dispose of contents/container in accordance with local regulations.
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### Hazards not otherwise classified

The product is under certain conditions capable of dust explosion.

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## 3. Composition / Information on Ingredients

### According to Regulation 2024 OSHA Hazard Communication Standard; 29 CFR Part 1910.1200

Vitamin A palmitate

CAS Number: 79-81-2  
Content (W/W): 15.0 - 40.0%  
Synonym: No data available.

Sucrose

CAS Number: 57-50-1  
Content (W/W): 10.0 - 30.0%  
Synonym: .alpha.-D-Glucopyranoside, .beta.-D-fructofuranosyl-

Starch

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CAS Number: 9087-61-0  
Content (W/W): 10.0 - 30.0%  
Synonym: Starch, hydrogen octenyl butanedioate, aluminum salt

### BHT

CAS Number: 128-37-0  
Content (W/W): 1.0 - 5.0%  
Synonym: 2,6-Bis(1,1-dimethylethyl)-4-methylphenol; BHT, Butylated hydroxytoluene, 2,6-Di-tert-butyl-p-cresol

### Isomers of Retinyl palmitate

Content (W/W): 1.0 - 5.0%  
Synonym: No data available.

The actual concentration is withheld as a trade secret.

## 4. First-Aid Measures

### Description of first aid measures

#### General advice:

First aid personnel should pay attention to their own safety. If the patient is likely to become unconscious, place and transport in stable sideways position (recovery position). Immediately remove contaminated clothing.

#### If inhaled:

Keep patient calm, remove to fresh air, seek medical attention.

#### If on skin:

Immediately wash thoroughly with soap and water, seek medical attention.

#### If in eyes:

Wash affected eyes for at least 15 minutes under running water with eyelids held open.

#### If swallowed:

Immediately rinse mouth and then drink 200-300 ml of water, seek medical attention.

### Most important symptoms and effects, both acute and delayed

*Information on: Vitamin A palmitate*

*Symptoms: Overexposure may cause: Eye irritation, skin irritation, erythema, nausea, headache, vomiting, dizziness, diarrhea, abdominal cramps*

### Indication of any immediate medical attention and special treatment needed

#### Note to physician

Treatment:

Treat according to symptoms (decontamination, vital functions), no known specific antidote.

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### 5. Fire-Fighting Measures

#### Extinguishing media

Suitable extinguishing media:

dry powder, carbon dioxide, water spray, foam

Unsuitable extinguishing media for safety reasons:

water spray

Additional information:

Avoid whirling up the material/product because of the danger of dust explosion.

#### Special hazards arising from the substance or mixture

Hazards during fire-fighting:

carbon oxides, harmful vapours

The substances/groups of substances mentioned can be released in case of fire. Generation of fumes/fog. Dust explosion hazard.

#### Advice for fire-fighters

Protective equipment for fire-fighting:

Wear self-contained breathing apparatus and chemical-protective clothing.

#### Further information:

Cool endangered containers with water-spray. Collect contaminated extinguishing water separately, do not allow to reach sewage or effluent systems. Dispose of fire debris and contaminated extinguishing water in accordance with official regulations.

Dusty conditions may ignite explosively in the presence of an ignition source causing flash fire.

### 6. Accidental release measures

Further accidental release measures:

Avoid dispersal of dust in the air (e.g. by clearing dusty surfaces with compressed air). Avoid the formation and build-up of dust - danger of dust explosion. Dust in sufficient concentration can result in an explosive mixture in air. Handle to minimize dusting and eliminate open flame and other sources of ignition.

#### Personal precautions, protective equipment and emergency procedures

Use personal protective clothing. Information regarding personal protective measures, see section 8. Ensure adequate ventilation. Avoid dust formation. Do not breathe dust.

#### Environmental precautions

Do not discharge into drains/surface waters/groundwater. Inform authorities in the event of product spillage to water courses or sewage systems.

#### Methods and material for containment and cleaning up

For small amounts: Contain with dust binding material and dispose of.

For large amounts: Sweep/shovel up. Collect waste in suitable containers, which can be labeled and sealed.

Dispose of absorbed material in accordance with regulations. Avoid raising dust. Cleaning operations should be carried out only while wearing breathing apparatus.

Nonsparking tools should be used.

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### 7. Handling and Storage

#### Precautions for safe handling

Avoid dust formation. Provide exhaust ventilation. This product may cause irritations; wash your hands after every contact.

#### Protection against fire and explosion:

Avoid whirling up the material/product because of the danger of dust explosion. Avoid dust formation. Dust in sufficient concentration can result in an explosive mixture in air. Handle to minimize dusting and eliminate open flame and other sources of ignition. Routine housekeeping should be instituted to ensure that dusts do not accumulate on surfaces. Dry powders can build static electricity charges when subjected to the friction of transfer and mixing operations. Provide adequate precautions, such as electrical grounding and bonding, or inert atmospheres. Refer to NFPA 660 (2025) Standard for Combustible Dust and Particulate Solids. NFPA 660 is a combination of Standards NFPA 61 (Agriculture and Food), NFPA 484 (Metals), NFPA 652 (Fundamentals of Combustible Dusts), NFPA 654 (Standard for the Prevention of Fire and Dust Explosions from the Manufacturing, Processing, and Handling of Combustible Particulate Solids), NFPA 65 (Sulfur), and NFPA 664 (Woodworking/Processing). Consult NFPA 660 standard for relevant commodity-specific and general safety information.

#### Conditions for safe storage, including any incompatibilities

Suitable materials for containers: High density polyethylene (HDPE), Low density polyethylene (LDPE), Aluminium

Further information on storage conditions: Keep container tightly closed and dry; store in a cool place. Protect from air. Protect from the effects of light.

### 8. Exposure Controls/Personal Protection

#### Components with occupational exposure limits

Sucrose	ACGIH, US:	TWA value 10 mg/m <sup>3</sup> ;
	OSHA Z1:	PEL 15 mg/m <sup>3</sup> Total dust ;
	OSHA Z1:	PEL 5 mg/m <sup>3</sup> Respirable fraction ;
BHT	ACGIH, US:	TWA value 2 mg/m <sup>3</sup> Inhalable fraction and vapor ;
Starch	ACGIH, US:	TWA value 1 mg/m <sup>3</sup> Respirable fraction ;

#### Advice on system design:

Provide local exhaust ventilation to control dust. It is recommended that all dust control equipment such as local exhaust ventilation and material transport systems involved in handling of this product contain explosion relief vents or an explosion suppression system or an oxygen deficient environment. 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). Use only appropriately classified electrical equipment and powered industrial trucks.

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### Personal protective equipment

#### **Respiratory protection:**

Wear a NIOSH-certified (or equivalent) particulate respirator.

#### **Hand protection:**

Wear chemical resistant protective gloves.

#### **Eye protection:**

Wear safety goggles (chemical goggles) if there is potential for airborne dust exposures.

#### **Body protection:**

Body protection must be chosen depending on activity and possible exposure, e.g. head protection, apron, protective boots, chemical-protection suit.

#### **General safety and hygiene measures:**

Under no circumstances should the product come into contact with the skin of pregnant women or be inhaled by them. Wearing of closed work clothing is required additionally to the stated personal protection equipment. Handle in accordance with good industrial hygiene and safety practice. Wash soiled clothing immediately. No eating, drinking, smoking or tobacco use at the place of work. Hands and/or face should be washed before breaks and at the end of the shift. Store work clothing separately.

## 9. Physical and Chemical Properties

Physical state:	solid	
Form:	free flowing fine granules	
Odour:	not applicable	
Odour threshold:	Not determined due to potential health hazard by inhalation.	
Colour:	light yellow	
pH value:	5.5 ( 10 %(m), 20 °C)	
melting range:	The substance / product decomposes therefore not determined.	
freezing range:	No data available.	
Boiling point:	not applicable	
Flash point:	not applicable, the product is a solid	
Flammability:	not highly flammable	(UN Test N.1 (ready combustible solids))
Lower explosion limit:	For solids not relevant for classification and labelling.	
Upper explosion limit:	For solids not relevant for classification and labelling.	
SADT:	Not a substance liable to self-decomposition according to UN transport regulations, class 4.1.	
Vapour pressure:	not applicable	
Density:	No information is available for the absolute density. Instead the bulk density was determined as a more relevant value.	
Bulk density:	approx. 600 kg/m <sup>3</sup>	
Relative vapour density:	not applicable, The product is a non- volatile solid.	

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Partitioning coefficient n-octanol/water (log Pow):	not applicable for mixtures
Thermal decomposition:	> 160 °C (DSC (DIN 51007)) self-accelerating reaction
Viscosity, dynamic:	No data available.
Viscosity, kinematic:	not applicable, the product is a solid
Solubility in water:	( 35 - 40 °C) dispersible
Molecular weight:	No data available.
Evaporation rate:	The product is a non-volatile solid.

### Particle characteristics

Particle size distribution: typically > 200 µm

(D50, Volumetric Distribution,  
ISO 13320-1)

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## 10. Stability and Reactivity

### **Reactivity**

No hazardous reactions if stored and handled as prescribed/indicated.

Corrosion to metals:

Corrosive effects to metal are not anticipated.

Oxidizing properties:

Based on its structural properties the product is not classified as oxidizing.

Minimum ignition energy:

(VDI 2263, sheet 1, 2.5 (May 1990))

The product is capable of dust explosion.

### **Chemical stability**

The product is stable if stored and handled as prescribed/indicated.

### **Possibility of hazardous reactions**

Dust explosion hazard.

### **Conditions to avoid**

Avoid heat. Avoid all sources of ignition: heat, sparks, open flame. Avoid light. Avoid dust formation.

### **Incompatible materials**

atmospheric moisture, atmospheric oxygen

### **Hazardous decomposition products**

Decomposition products:

Hazardous decomposition products: No hazardous decomposition products if stored and handled as prescribed/indicated.

Thermal decomposition:

> 160 °C (DSC (DIN 51007))

self-accelerating reaction

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### 11. Toxicological information

#### Primary routes of exposure

Routes of entry for solids and liquids are ingestion and inhalation, but may include eye or skin contact. Routes of entry for gases include inhalation and eye contact. Skin contact may be a route of entry for liquefied gases.

#### Acute Toxicity/Effects

##### Acute toxicity

Assessment of acute toxicity: Virtually nontoxic after a single ingestion.

##### Oral

Type of value: ATE

Value: > 5,000 mg/kg

*Information on: Vitamin A palmitate*

*Type of value: LD50*

*Species: rat (male/female)*

*Value: > 2,000 mg/kg (BASF-Test)*

*No mortality was observed. The product has not been tested. The statement has been derived from substances/products of a similar structure or composition.*

##### Inhalation

No data available.

##### Dermal

No data available.

##### Assessment other acute effects

Assessment of STOT single:

Based on available data, the classification criteria are not met.

##### Irritation / corrosion

Assessment of irritating effects: Not irritating to the eyes. Skin contact causes slight irritation.

##### Skin

*Information on: Vitamin A palmitate*

*Species: rabbit*

*Result: Irritant.*

*Method: BASF-Test*

*Species: rabbit*

*Result: Slightly irritating.*

*Method: OECD Guideline 404*

##### Eye



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*Information on: Vitamin A palmitate*  
*Species: rabbit*  
*Result: non-irritant*  
*Method: OECD Guideline 405*  
-----

### Sensitization

Assessment of sensitization: Based on available data, the classification criteria are not met.

*Information on: Vitamin A palmitate*  
*Assessment of sensitization:*  
*Skin sensitizing effects were not observed in animal studies.*  
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### Aspiration Hazard

No aspiration hazard expected.

### **Chronic Toxicity/Effects**

#### Repeated dose toxicity

Assessment of repeated dose toxicity: Based on available data, the classification criteria are not met.

*Information on: Vitamin A palmitate*  
*Assessment of repeated dose toxicity: Repeated exposure to large quantities may affect certain organs.*

*Information on: Phenol, 2,6-bis(1,1-dimethylethyl)-4-methyl-*  
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### Genetic toxicity

Assessment of mutagenicity: Based on the ingredients, there is no suspicion of a mutagenic effect.

*Information on: Vitamin A palmitate*  
*Assessment of mutagenicity: In the majority of tests performed (bacteria/microorganisms/cell cultures) a mutagenic effect was not found. A mutagenic effect was also not observed in in-vivo assays. The product has not been fully tested. The statements have been derived in parts from products of a similar structure or composition.*  
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### Carcinogenicity

Assessment of carcinogenicity: The whole of the information assessable provides no indication of a carcinogenic effect.

*Information on: Vitamin A palmitate*  
*Assessment of carcinogenicity: Results from a number of long-term carcinogenity studies and short-term tests are available. Taking into account all of the information, there is no indication that the substance itself is carcinogenic. Literature data.*

*Information on: BHT*

*Assessment of carcinogenicity: The substance caused cancer in animal studies. The International Agency for Research on Cancer (IARC) has classified this substance as group 3, not classifiable as to its carcinogenicity to humans.*  
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### Reproductive toxicity

Assessment of reproduction toxicity: Based on available data, the classification criteria are not met.

### Teratogenicity

Assessment of teratogenicity: The substance caused malformations/developmental toxicity in laboratory animals.

*Information on: Vitamin A palmitate*

*Assessment of teratogenicity: May cause harm to the unborn child.*

### Other Information

The product has not been tested. The statements on toxicology have been derived from the properties of the individual components.

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## 12. Ecological Information

### **Toxicity**

#### Aquatic toxicity

Assessment of aquatic toxicity:

Acutely toxic for aquatic organisms. May cause long-term adverse effects in the aquatic environment.

#### Toxicity to fish

*Information on: BHT*

*LC0 (96 h)  $\geq$  0.57 mg/l, Brachydanio rerio (OECD 203; ISO 7346; 84/449/EWG, C.1, semistatic)*

*The statement of the toxic effect relates to the analytically determined concentration. Limit concentration test only (LIMIT test).*

#### Aquatic invertebrates

*Information on: BHT*

*EC0 (48 h) 0.48 mg/l, Daphnia magna (OECD Guideline 202, part 1, static)*

*The statement of the toxic effect relates to the analytically determined concentration.*

#### Aquatic plants

*Information on: BHT*

*EC50 (72 h)  $>$  0.40 mg/l (growth rate), Scenedesmus subspicatus (Guideline 92/69/EEC, C.3, static)*

*The statement of the toxic effect relates to the analytically determined concentration.*

### Assessment of terrestrial toxicity

No data available.

### **Microorganisms/Effect on activated sludge**

#### Toxicity to microorganisms

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*Information on: BHT*  
*DIN EN ISO 8192-OECD 209-88/302/EEC, P. C aerobic*  
*activated sludge/EC0 (3 h): 1,000 mg/l*  
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### Persistence and degradability

Assessment biodegradation and elimination (H<sub>2</sub>O)  
Product is not expected to be readily biodegradable.

Assessment biodegradation and elimination (H<sub>2</sub>O)

*Information on: Vitamin A palmitate*

*Not readily biodegradable (by OECD criteria). Moderately/partially biodegradable.*

*Information on: BHT*

*Not readily biodegradable (by OECD criteria). Poorly biodegradable.*  
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### Elimination information

*Information on: Vitamin A palmitate*  
*40 - 50 % BOD of the ThOD (28 d) (OECD 301F; ISO 9408; 92/69/EWG, C.4-D) (aerobic, activated*  
*sludge, domestic)*

*Information on: BHT*  
*4.5 % BOD of the ThOD (28 d) (OECD 301C; ISO 9408; 92/69/EWG, C.4-F) (aerobic, activated*  
*sludge)*  
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### Bioaccumulative potential

Assessment bioaccumulation potential  
No data available.

Assessment bioaccumulation potential

*Information on: Vitamin A palmitate*

*The product will not be readily bioavailable due to its consistency and insolubility in water. No*  
*significant accumulation in organisms is expected as a result of the distribution coefficient of n-*  
*octanol/water (log Pow).*  
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### Bioaccumulation potential

*Information on: BHT*

*Bioconcentration factor: 330 - 1,800 (28 d), Cyprinus carpio (OECD Guideline 305 C)*

*Bioconcentration factor: 230 - 2,500 (56 d), Cyprinus carpio (OECD Guideline 305 C)*  
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### Mobility in soil

#### Assessment transport between environmental compartments

No data available.

*Information on: Vitamin A palmitate*

*The substance will not evaporate into the atmosphere from the water surface.*

*Adsorption to solid soil phase is expected.*

### Additional information

Other ecotoxicological advice:

The product has not been tested. The statement has been derived from the properties of the individual components.

## 13. Disposal considerations

### **Waste disposal of substance:**

Do not discharge into waterways or sewer systems without proper authorization. Dispose of in accordance with national, state and local regulations.

### **Container disposal:**

Dispose of in accordance with national, state and local regulations.

## 14. Transport Information

### **Land transport**

USDOT

Hazard class: 9

Packing group: III

ID number: UN 3077

Hazard label: 9, EHSM

Proper shipping name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.  
(contains 2,6-DI-TERT-BUTYL-P-CRESOL)

### **Sea transport**

IMDG

Hazard class: 9

Packing group: III

ID number: UN 3077

Hazard label: 9, EHSM

Marine pollutant: YES

Proper shipping name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.  
(contains 2,6-DI-TERT-BUTYL-P-CRESOL)

### **Air transport**

IATA/ICAO

Hazard class: 9

Packing group: III

ID number: UN 3077

Hazard label: 9, EHSM

Proper shipping name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.  
(contains 2,6-DI-TERT-BUTYL-P-CRESOL)

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### Further information

Product may be shipped as non-hazardous in suitable packages containing a net quantity of 5 kg or less under the provisions of various regulatory agencies: ADR, RID, ADN: Special Provision 375; IMDG: 2:10.2.7; IATA: A197; TDS: Special Provision 99(2); 49CFR: §171.4 (c) (2) and also the Special Provision 375 in Appendix B which is regulated in China "Regulations Concerning Road Transportation of Dangerous Goods Part 3: Index of dangerous goods name and transportation requirements" (JT/T 617.3)

## 15. Regulatory Information

### Federal Regulations

#### **Registration status:**

Food TSCA, US released / exempt

Chemical TSCA, US released / listed

Chemical TSCA, US

All substances are TSCA listed and active.

**EPCRA 311/312 (Hazard categories):** Refer to SDS section 2 for GHS hazard classes applicable for this product.

### State regulations

#### State RTK

NJ

PA

#### CAS Number

128-37-0

57-50-1

128-37-0

#### Chemical name

BHT

Sucrose

BHT

**Safe Drinking Water & Toxic Enforcement Act, CA Prop. 65:**

### BASF Risk Assessment, CA Prop. 65:

Based on an evaluation of the product's composition and the use(s) described in this section below, this product does not require a California Proposition 65 Warning:

Human nutrition

#### **NFPA Hazard codes:**

Health: 1 Fire: 1 Reactivity: 0 Special:

#### **HMIS III rating**

Health: 1 $\alpha$  Flammability: 1 Physical hazard: 0

### Assessment of the hazard classes according to UN GHS criteria (most recent version):

Skin Corr./Irrit.	3	Skin corrosion/irritation
Repr.	1B (unborn child)	Reproductive toxicity
Aquatic Acute	2	Hazardous to the aquatic environment - acute
Aquatic Chronic	2	Hazardous to the aquatic environment - chronic

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### 16. Other Information

**SDS Prepared by:**

BASF NA Product Regulations

SDS Prepared on: 2025/09/03

We support worldwide Responsible Care® initiatives. We value the health and safety of our employees, customers, suppliers and neighbors, and the protection of the environment. Our commitment to Responsible Care is integral to conducting our business and operating our facilities in a safe and environmentally responsible fashion, supporting our customers and suppliers in ensuring the safe and environmentally sound handling of our products, and minimizing the impact of our operations on society and the environment during production, storage, transport, use and disposal of our products.

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IMPORTANT: WHILE THE DESCRIPTIONS, DESIGNS, DATA AND INFORMATION CONTAINED HEREIN ARE PRESENTED IN GOOD FAITH AND BELIEVED TO BE ACCURATE, IT IS PROVIDED FOR YOUR GUIDANCE ONLY. BECAUSE MANY FACTORS MAY AFFECT PROCESSING OR APPLICATION/USE, WE RECOMMEND THAT YOU MAKE TESTS TO DETERMINE THE SUITABILITY OF A PRODUCT FOR YOUR PARTICULAR PURPOSE PRIOR TO USE. NO WARRANTIES OF ANY KIND, EITHER EXPRESSED OR IMPLIED, INCLUDING WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE, ARE MADE REGARDING PRODUCTS DESCRIBED OR DESIGNS, DATA OR INFORMATION SET FORTH, OR THAT THE PRODUCTS, DESIGNS, DATA OR INFORMATION MAY BE USED WITHOUT INFRINGING THE INTELLECTUAL PROPERTY RIGHTS OF OTHERS. IN NO CASE SHALL THE DESCRIPTIONS, INFORMATION, DATA OR DESIGNS PROVIDED BE CONSIDERED A PART OF OUR TERMS AND CONDITIONS OF SALE. FURTHER, YOU EXPRESSLY UNDERSTAND AND AGREE THAT THE DESCRIPTIONS, DESIGNS, DATA, AND INFORMATION FURNISHED BY OUR COMPANY HEREUNDER ARE GIVEN GRATIS AND WE ASSUME NO OBLIGATION OR LIABILITY FOR THE DESCRIPTION, DESIGNS, DATA AND INFORMATION GIVEN OR RESULTS OBTAINED, ALL SUCH BEING GIVEN AND ACCEPTED AT YOUR RISK.

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