

PARSOL® Shield**5015883**

Version 1.2

Revision Date 06/22/2017

Date of last issue: 05/01/2017

SECTION 1. IDENTIFICATION

Product name : PARSOL® Shield

Substance name : (6Z)-3-(2-ethylhexoxy)-6-[(4Z)-4-[4-(2-ethylhexoxy)-6-oxocyclohexa-2,4-dien-1-ylidene]-6-(4-methoxyphenyl)-1H-1,3,5-triazin-2-yliden

Manufacturer or supplier's details

Company name of supplier : DSM Nutritional Products

Address : 45 Waterview Blvd
Parsippany NJ 07054-1298

Telephone : (908) 475-7373
Telefax : (908) 475-7406

Emergency telephone number : 1-800-424-9300 (24 HR CHEMTREC, CA & US); Outside CA & US +1-703-741-5970 (COLLECT CALLS ACCEPTED)

E-mail address of person responsible for the SDS : sds.nutritionalproducts@dsm.com

Recommended use of the chemical and restrictions on use

Recommended use : **UV filter**
Ingredient for personal care products

SECTION 2. HAZARDS IDENTIFICATION**GHS classification in accordance with 29 CFR 1910.1200**

Combustible dust

GHS label elements

Signal word : Warning

Hazard statements : May form combustible dust concentrations in air.

Other hazards

Risk of dust explosion.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Brief description of the product : Substance

Synonyms : Bis-Ethylhexyloxyphenol Methoxyphenyl Triazine (INCI), Bemotrizinol

CAS-No. : 187393-00-6

Molecular formula : C38H49N3O5

Hazardous components

No hazardous ingredients

Further ingredients

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Component	CAS-No.	Weight percent
phenol, 2,2'-[6-(4-methoxyphenyl)-1,3,5-triazine-2,4-diyl]bis[5-[(2-ethylhexyl)oxy]-	187393-00-6	98 - 100

SECTION 4. FIRST AID MEASURES

- General advice : No hazards which require special first aid measures.
- If inhaled : Move to fresh air.
If symptoms persist, call a physician.
- In case of skin contact : Take off contaminated clothing and shoes immediately.
Wash off with soap and plenty of water.
- In case of eye contact : Flush eyes with water as a precaution.
Remove contact lenses.
Protect unharmed eye.
Keep eye wide open while rinsing.
- If swallowed : Clean mouth with water and drink afterwards plenty of water.
Do not give milk or alcoholic beverages.
Never give anything by mouth to an unconscious person.
- Most important symptoms and effects, both acute and delayed : No specific symptoms known.
- Notes to physician : Treat symptomatically.

SECTION 5. FIREFIGHTING MEASURES

- Suitable extinguishing media : Water
Foam
- Specific hazards during fire-fighting : None known.
- Further information : Consider dust explosion hazard.
- Special protective equipment for firefighters : In the event of fire, wear self-contained breathing apparatus.

SECTION 6. ACCIDENTAL RELEASE MEASURES

- Personal precautions, protective equipment and emergency procedures : Use personal protective equipment.
Avoid dust formation.
- Environmental precautions : Try to prevent the material from entering drains or water courses.
- Methods and materials for containment and cleaning up : Sweep up and shovel.

SECTION 7. HANDLING AND STORAGE

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Advice on protection against fire and explosion	: Avoid dust formation. Provide appropriate exhaust ventilation at places where dust is formed. Take precautionary measures against static discharges.
Advice on safe handling	: For personal protection see section 8.
Conditions for safe storage	: Protect against light. Do not freeze. Keep container tightly closed and dry.
Materials to avoid	: No special restrictions on storage with other products.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION**Components with workplace control parameters**

Contains no substances with occupational exposure limit values.

Personal protective equipment

Respiratory protection	: No personal respiratory protective equipment normally required. In case of high dust concentration use a dust mask applicable to local conditions.
Hand protection	
Remarks	: Glove material: for example nitrile rubber
Eye protection	: Safety glasses
Skin and body protection	: Lightweight protective clothing
Hygiene measures	: General industrial hygiene practice.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES**Information on basic physical and chemical properties**

Appearance	: powder
Colour	: light yellow - yellow
Odour	: slight, characteristic
Odour Threshold	: No information available.
pH	: 7 (1 g/l, 20 °C)
Melting point/range	: ca. 80.4 °C (1,013 hPa; OECD Test Guideline 102) publicly available data
Boiling point/boiling range	: > 400 °C (1,013 hPa; OECD Test Guideline 103) publicly available data
Flash point	: 543 °F (284 °C) at 1,013 hPa (101,300 mm/HG) Method: ISO 2719publicly available data
Flammability (solid, gas)	: May form combustible dust concentrations in air.
Vapour pressure	: < 0.0001 hPa (25 °C; OECD Test Guideline 104) publicly available data

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Relative vapour density	: Not applicable
Density	: 1.17 g/cm ³ (20 °C)
Water solubility	: < 0.014 mg/l (20 °C, pH 4.65; OECD Test Guideline 105) publicly available data
Partition coefficient: n-octanol/water	: log Pow > 5.7 (20 °C; OECD Test Guideline 107) publicly available data
Ignition temperature	: > 752 °F (> 400 °C) (Tested according to Directive 92/69/EEC.) publicly available data
Thermal decomposition	: Not relevant
Explosive properties	: Not explosive
Oxidizing properties	: No data available

Other information

Combustibility index for deposited dust	: 3 (23 °C)
Dust explosion class	: St(H)1 (Milled sample, Median value of the tested sample 0.059 mm, Loss on drying 0.3 %; The value was determined in the modified Hartmann tube.)
Minimum ignition energy	: 10 - 30 mJ (Milled sample, Median value of the tested sample 0.059 mm, Loss on drying 0.3 %, EN 13821) The Minimum ignition energy (MIE) of a dust/air mix depends on the particle size the water content and the temperature of the dust. The finer and the dryer the dust the lower the MIE. : General remark: The indicated dust explosion characteristics are only valid for this product and are sensitive to the sample's parameters.
Powder volume resistivity	: 6E+11 Ohmm (Product sample, Median value of the tested sample 0.345 mm, Loss on drying 0.3 %) The material can accumulate static charge and can therefore cause electrical ignition.
Minimum ignition temperature of a dust/air mix	: 440 °C (Median value of the tested sample 0.059 mm) determined in the BAM oven
Molecular weight	: 627.8 g/mol
Bulk density	: 650 - 700 kg/m ³

SECTION 10. STABILITY AND REACTIVITY

Reactivity	: No hazards to be specially mentioned.
Chemical stability	: Stable under recommended storage conditions.
Possibility of hazardous reactions	: Dust may form explosive mixture in air.
Conditions to avoid	: Heat

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Incompatible materials	: Strong acids and strong bases Strong oxidizing agents
Hazardous decomposition products	: Nitrogen oxides (NO_x) Carbon monoxide, carbon dioxide and unburned hydrocarbons (smoke).

SECTION 11. TOXICOLOGICAL INFORMATION

Acute oral toxicity	: LD50 (Rat): > 2,000 mg/kg Test performed using a similar product. (OECD Test Guideline 401)
Acute dermal toxicity	: LD50 (Rat, male and female): > 2,000 mg/kg (OECD Test Guideline 402)
Skin irritation	: No skin irritation (Rabbit, OECD Test Guideline 404, 4 h) Test performed using a similar product. : No skin irritation (human skin, OECD Test Guideline 439, 15 min) : not phototoxic (human skin)
Eye irritation	: No eye irritation (In vitro study, OECD Test Guideline 437)
Sensitisation	: negative (in vitro assay, OECD Test Guideline 442C) : negative (KeratinoSens assay, OECD Test Guideline 442D) : no photoallergenic skin reaction (human)
Genotoxicity in vitro	: not mutagenic (Ames test, OECD Test Guideline 471) : not genotoxic (In vitro study, OECD Test Guideline 473)
Genotoxicity in vivo	: not genotoxic (Micronucleus test, mice, Bone marrow, Intraperitoneal injection, OECD Test Guideline 474) publicly available data
Carcinogenicity	: NOAEL: >= 1,000 mg/kg bw/d (Rat male and female, Dermal, OECD Test Guideline 451) Chronic toxicity study (2 years) Test performed using a similar product.
IARC	No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC. No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed

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	human carcinogen by IARC.
OSHA	No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA. No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.
NTP	No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP. No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.
Reproductive toxicity	: NOAEL: $\geq 1,000$ mg/kg bw/d (Rat, male and female, Oral, OECD Test Guideline 415) : publicly available data NOAEL: 1,000 mg/kg bw/d (Rat, male and female, Oral, OECD Test Guideline 416)
Teratogenicity	: NOAEL: 1,000 mg/kg bw/d (Rat, Oral, OECD Test Guideline 414, Pure substance)
STOT - single exposure (Acute exposure)	: The substance or mixture is not classified as specific target organ toxicant, single exposure.
STOT - repeated exposure	: NOAEL (Oral, Rat, male and female) : ≥ 1000 mg/kg bw/d Sub-chronic toxicity study (90-day) Test performed using a similar product. (OECD Test Guideline 408) : NOAEL (Dermal, Rat, male and female) : ≥ 1000 mg/kg bw/d Chronic toxicity study (2 years) (OECD Test Guideline 451)
Further information	: The skin absorption rate is very low.
Aspiration toxicity	: No aspiration toxicity classification

SECTION 12. ECOLOGICAL INFORMATION**Toxicity**

Toxicity to fish	: Danio rerio (zebra fish) NOEC (96 h) ≥ 0.81 mg/l No toxicity at the limit of solubility Test performed using a similar product. (OECD Test Guideline 203)
Toxicity to daphnia and other aquatic invertebrates	: Daphnia magna (Water flea) NOEC (48 h) ≥ 0.114 mg/l

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- The substance tested had no adverse effects below its water solubility limit.
Test performed using a similar product.
(OECD Test Guideline 202)
- Toxicity to algae : Desmodesmus subspicatus (green algae)
NOEC (72 h) $\geq$ 0.017 mg/l
No toxicity at the limit of solubility
Test performed using a similar product.
(OECD Test Guideline 201)
- Toxicity to bacteria : activated sludge
EC50 (3 h) $\geq$ 1,000 mg/l
(nominal concentration)
Test performed using a similar product.
(OECD Test Guideline 209)
- Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : Daphnia magna (Water flea)
NOEC (21 d) 0.7 mg/l
No toxicity at the limit of solubility
(OECD Test Guideline 211)
Test performed using a similar product.

Persistence and degradability

- Biodegradability : Not inherently biodegradable.
2.6 % (28 d)
(OECD Test Guideline 301F)
Test performed using a similar product.

Bioaccumulative potential

- Partition coefficient: n-octanol/water : log Pow $>$ 5.7 (20 °C ; OECD Test Guideline 107)
publicly available data

Mobility in soil

- Distribution among environmental compartments : No data available

Results of PBT and vPvB assessment

- Assessment : This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

Other adverse effects

- Regulation 40 CFR Protection of Environment; Part 82 Protection of Stratospheric Ozone - CAA Section 602 Class I Substances
- Remarks This product neither contains, nor was manufactured with a Class I or Class II ODS as defined by the U.S. Clean Air Act Section 602 (40 CFR 82, Subpt. A, App.A + B).

- Additional ecological information : Aquatic toxicity is unlikely due to low solubility.

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SECTION 13. DISPOSAL CONSIDERATIONS**Disposal methods**

- Waste from residues : Offer surplus and non-recyclable solutions to a licensed disposal company.
- User must determine if any wastes generated exhibit hazardous characteristics as per 40 CFR Part 261 or other national / local legislation.
- Contaminated packaging : Empty containers should be taken to an approved waste handling site for recycling or disposal.

SECTION 14. TRANSPORT INFORMATION**International Regulations****UNRTDG**

Not regulated as a dangerous good

IATA-DGR

Not regulated as a dangerous good

IMDG-Code

Not regulated as a dangerous good

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

Not applicable for product as supplied.

National Regulations**49 CFR**

Not regulated as a dangerous good

Remarks : Not classified as dangerous in the meaning of transport regulations.

SECTION 15. REGULATORY INFORMATION**EPCRA - Emergency Planning and Community Right-to-Know Act****CERCLA Reportable Quantity**

This material does not contain any components with a CERCLA RQ.

SARA 304 Extremely Hazardous Substances Reportable Quantity

This material does not contain any components with a section 304 EHS RQ.

SARA 311/312 Hazards : Fire Hazard

SARA 302 : No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

SARA 313 : This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

Clean Air Act

This product neither contains, nor was manufactured with a Class I or Class II ODS as defined by the U.S. Clean Air Act Section 602 (40 CFR 82, Subpt. A, App.A + B).

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This product does not contain any hazardous air pollutants (HAP), as defined by the U.S. Clean Air Act Section 112 (40 CFR 61).

This product does not contain any chemicals listed under the U.S. Clean Air Act Section 112(r) for Accidental Release Prevention (40 CFR 68.130, Subpart F).

This product does not contain any chemicals listed under the U.S. Clean Air Act Section 111 SOCM Intermediate or Final VOC's (40 CFR 60.489).

Clean Water Act

This product does not contain any Hazardous Substances listed under the U.S. CleanWater Act, Section 311, Table 116.4A.

This product does not contain any Hazardous Chemicals listed under the U.S. CleanWater Act, Section 311, Table 117.3.

This product does not contain any toxic pollutants listed under the U.S. Clean Water Act Section 307

US State Regulations**Massachusetts Right To Know**

No components are subject to the Massachusetts Right to Know Act.

Pennsylvania Right To Know

phenol, 2,2'-[6-(4-methoxyphenyl)-1,3,5-triazine-2,4-diyl]bis[5- 187393-00-6
[(2-ethylhexyl)oxy]-

TSCA list

No substances are subject to a Significant New Use Rule.

No substances are subject to TSCA 12(b) export notification requirements.

SECTION 16. OTHER INFORMATION**Full text of other abbreviations**

AICS - Australian Inventory of Chemical Substances; ASTM - American Society for the Testing of Materials; bw - Body weight; CERCLA - Comprehensive Environmental Response, Compensation, and Liability Act; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DOT - Department of Transportation; DSL - Domestic Substances List (Canada); ECx - Concentration associated with x% response; EHS - Extremely Hazardous Substance; 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; HMIS - Hazardous Materials Identification System; 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; MSHA - Mine Safety and Health Administration; n.o.s. - Not Otherwise Specified; NFPA - National Fire Protection Association; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; 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; RCRA - Resource Conservation and

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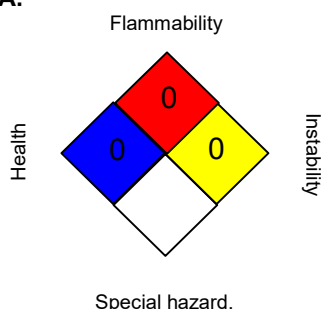
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Recovery Act; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; RQ - Reportable Quantity; SADT - Self-Accelerating Decomposition Temperature; SARA - Superfund Amendments and Reauthorization Act; SDS - Safety Data Sheet; TCSI - Taiwan Chemical Substance 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

ACGIH = American Conference of Governmental Industrial Hygienists. CFR = Code of Federal Regulations. EPA = Environmental Protection Agency. NIOSH = National Institute of Occupational Safety and Health. OSHA = Occupational Safety and Health Administration. STEL = Short term exposure limit. TLV = Threshold Limit Value. TWA = Time Weighted Average.

Further information**NFPA:****HMIS® IV:**

HEALTH	0
FLAMMABILITY	0
PHYSICAL HAZARD	0

HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks. The "*" represents a chronic hazard, while the "/" represents the absence of a chronic hazard.

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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 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.

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