

SECTION 1: Identification of the substance/mixture and of the company/undertaking**1.1 Product identifier**

Trade name : PARSOL® Shield

REACH Registration Number : 01-2119777812-28-0003

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

CAS-No. : 187393-00-6

1.2 Relevant identified uses of the substance or mixture and uses advised against

Use of the Substance/Mixture : UV filter, Ingredient for personal care products

1.3 Details of the supplier of the safety data sheet

Company : DSM Nutritional Products Ltd.
PO Box 2676
CH-4002 Basel

Telephone : +41618158888

Telefax : +41618157253

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

1.4 Emergency telephone number

+41 62 866 2314

SECTION 2: Hazards identification**2.1 Classification of the substance or mixture**

Classification (REGULATION (EC) No 1272/2008)
Not a hazardous substance or mixture.

2.2 Label elements

Labelling (REGULATION (EC) No 1272/2008)
Not a hazardous substance or mixture.

2.3 Other hazards

Risk of dust explosion.

SECTION 3: Composition/information on ingredients

Synonyms : Bis-Ethylhexyloxyphenol Methoxyphenyl Triazine (INCI)
Bemotrizinol

Brief description of the product : Substance

Molecular formula : C38H49N3O5

3.1 Substances**Hazardous components**

Remarks : No hazardous ingredients

Further ingredients

Chemical name	CAS-No. EC-No. Registration number	GHS Classification	Concentration [%]
phenol, 2,2'-[6-(4-methoxyphenyl)-1,3,5-triazine-2,4-diyl]bis[5-[(2-ethylhexyl)oxy]-	187393-00-6 425-950-7 01-2119777812-28-		>= 98 - <= 100

SECTION 4: First aid measures

4.1 Description of 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.

4.2 Most important symptoms and effects, both acute and delayed

- Symptoms : No specific symptoms known.

4.3 Indication of any immediate medical attention and special treatment needed

- Treatment : Treat symptomatically.

SECTION 5: Firefighting measures

5.1 Extinguishing media

- Suitable extinguishing media : Water
Foam

5.2 Special hazards arising from the substance or mixture

- Specific hazards during fire-fighting : None known.

5.3 Advice for firefighters

- Special protective equipment for firefighters : In the event of fire, wear self-contained breathing apparatus.
- Further information : Consider dust explosion hazard.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

- Use personal protective equipment.
Avoid dust formation.

6.2 Environmental precautions

Try to prevent the material from entering drains or water courses.

6.3 Methods and material for containment and cleaning up

Sweep up and shovel.

6.4 Reference to other sections

For personal protection see section 8.
For disposal considerations see section 13.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

- Advice on safe handling : For personal protection see section 8.
- 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.
- Hygiene measures : General industrial hygiene practice.

7.2 Conditions for safe storage, including any incompatibilities

- Requirements for storage areas and containers : Protect against light.
Do not freeze.
- Keep container tightly closed and dry.
- Advice on common storage : No special restrictions on storage with other products.

7.3 Specific end use(s)

- Specific use(s) : Not applicable

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Contains no substances with occupational exposure limit values.

8.2 Exposure controls

Personal protective equipment

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

SECTION 9: Physical and chemical properties

9.1 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 (at 1,013 hPa; OECD Test Guideline 102) publicly available data
Boiling point/boiling range	: > 400 °C (at 1,013 hPa; OECD Test Guideline 103) publicly available data
Flash point	: 284 °C (1,013 hPa, ISO 2719) publicly 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
Relative vapour density	: Not applicable
Density	: 1.17 g/cm ³ (at 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	: > 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

9.2 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 tempera-	: 440 °C (Median value of the tested sample 0.059 mm)

ture of a dust/air mix	determined in the BAM oven
Molecular weight	: 627.8 g/mol
Bulk density	: 650 - 700 kg/m ³

SECTION 10: Stability and reactivity

10.1 Reactivity

No hazards to be specially mentioned.

10.2 Chemical stability

Stable under recommended storage conditions.

10.3 Possibility of hazardous reactions

Dust may form explosive mixture in air.

10.4 Conditions to avoid

Heat

10.5 Incompatible materials

Strong acids and strong bases
Strong oxidizing agents

10.6 Hazardous decomposition products

Nitrogen oxides (NO_x)
Carbon monoxide, carbon dioxide and unburned hydrocarbons (smoke).

SECTION 11: Toxicological information

11.1 Information on toxicological effects

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: $\geq 1,000$ mg/kg bw/d (Rat male and female, Dermal, OECD Test Guideline 451) Chronic toxicity study (2 years) Test performed using a similar product.
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

12.1 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

- 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.

12.2 Persistence and degradability

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

12.3 Bioaccumulative potential

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

12.4 Mobility in soil

- Distribution among environmental compartments : No data available

12.5 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.

12.6 Other adverse effects

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

SECTION 13: Disposal considerations

13.1 Waste treatment methods

- Product : Offer surplus and non-recyclable solutions to a licensed dis-

posal company.

Contaminated packaging : Empty containers should be taken to an approved waste handling site for recycling or disposal.

SECTION 14: Transport information

14.1 UN number

Not regulated as a dangerous good

14.2 UN proper shipping name

Not regulated as a dangerous good

14.3 Transport hazard class(es)

Not regulated as a dangerous good

14.4 Packing group

Not regulated as a dangerous good

14.5 Environmental hazards

Not regulated as a dangerous good

14.6 Special precautions for user

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

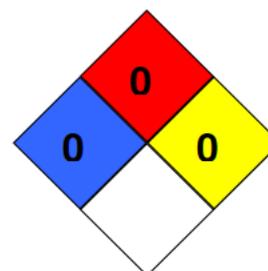
14.7 Transport in bulk according to Annex II of Marpol and the IBC Code

Not applicable for product as supplied.

SECTION 15: Regulatory information

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

NFPA Classification : Health hazard: 0
Fire Hazard: 0
Reactivity Hazard: 0



15.2 Chemical safety assessment

A Chemical Safety Assessment is not required for this substance.

SECTION 16: Other information

Full text of other abbreviations

ADN - European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways; ADR - European Agreement concerning the International Carriage of Dangerous Goods by Road; AICS - Australian Inventory of Chemical Substances; ASTM - American Society for the Testing of Materials; bw - Body weight; CLP - Classification Labelling Packaging Regulation; Regulation (EC) No 1272/2008; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DSL - Domestic Substances List (Canada); ECHA - European Chemicals Agency; EC-Number - European Community number; ECx -

SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006



PARSOL® Shield

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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; 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; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; 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; RID - Regulations concerning the International Carriage of Dangerous Goods by Rail; SADT - Self-Accelerating Decomposition Temperature; SDS - Safety Data Sheet; TCSI - Taiwan Chemical Substance Inventory; TRGS - Technical Rule for Hazardous Substances; TSCA - Toxic Substances Control Act (United States); UN - United Nations; vPvB - Very Persistent and Very Bioaccumulative

Further information

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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