



SAFETY DATA SHEET

This safety data sheet was created pursuant to the requirements of:
OSHA Hazard Communication Standard (29 CFR 1910.1200)

Issuing Date 21-Sep-2020

Revision date 29-Jan-2021

Revision Number 2

1. Identification

Product identifier

Product Name Omnirad 819

Other means of identification

Product Code(s) 10000182

Recommended use of the chemical and restrictions on use

Recommended use Photoinitiator.
For use in industrial installations or professional treatment only.

Restrictions on use Consumer use.

Details of the supplier of the safety data sheet

Supplier Address

IGM Resins US Inc.
3300 Westinghouse Blvd.
Charlotte, NC 28273, United States
T: +1-704-588-2500
F: +1-704-945-8728

Emergency telephone number

Emergency Telephone (US) +1 760 476 3962 ## 333 293
TF (US)+1 866 519 4752 ## 333 293

2. Hazard(s) identification

Classification

Skin sensitization	Category 1A
Chronic aquatic toxicity	Category 4

Hazards not otherwise classified (HNOC)

Not applicable

Label elements



Warning**Hazard statements**

H317 - May cause an allergic skin reaction

H413 - May cause long lasting harmful effects to aquatic life

Precautionary statements

P261 - Avoid breathing dust/fume/gas/mist/vapors/spray

P272 - Contaminated work clothing should not be allowed out of the workplace

P280 - Wear protective gloves

P302 + P352 - IF ON SKIN: Wash with plenty of soap and water

P333 + P313 - If skin irritation or rash occurs: Get medical advice/attention

P363 - Wash contaminated clothing before reuse

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

P273 - Avoid release to the environment

Other information

No information available.

3. Composition/information on ingredients**Substance**

Chemical name	CAS No	Weight-%	Trade secret
phenyl bis(2,4,6-trimethylbenzoyl)-phosphine oxide	162881-26-7	80 - <100%	*

*The exact percentage (concentration) of composition has been withheld as a trade secret.

Batch-to-batch variability occurs when the product has a set formula but there may be some very small differences among the batches that occur during the production process.

4. First-aid measures**Description of first aid measures**

General advice	Show this safety data sheet to the doctor in attendance.
Inhalation	Remove to fresh air.
Eye contact	Rinse thoroughly with plenty of water for at least 15 minutes, lifting lower and upper eyelids. Consult a physician.
Skin contact	Wash with soap and water. May cause an allergic skin reaction. In the case of skin irritation or allergic reactions see a physician.
Ingestion	Clean mouth with water and drink afterwards plenty of water.

Most important symptoms and effects, both acute and delayed**Symptoms** Itching. Rashes. Hives.**Indication of any immediate medical attention and special treatment needed****Note to physicians** May cause sensitization in susceptible persons. Treat symptomatically.**5. Fire-fighting measures**

Suitable Extinguishing Media	Use extinguishing measures that are appropriate to local circumstances and the surrounding environment, Alcohol resistant foam, Carbon dioxide (CO ₂), Dry chemical, Use extinguishing measures that are appropriate to local circumstances and the surrounding environment. Alcohol resistant foam. Carbon dioxide (CO ₂). Dry chemical.
Large Fire	CAUTION: Use of water spray when fighting fire may be inefficient.
Unsuitable extinguishing media	Do not scatter spilled material with high pressure water streams.
Specific hazards arising from the chemical	Product is or contains a sensitizer. May cause sensitization by skin contact.
Explosion data	
Sensitivity to mechanical impact	None.
Sensitivity to static discharge	None.
Special protective equipment for fire-fighters	Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear. Use personal protection equipment.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

Personal precautions	Avoid contact with skin, eyes or clothing. Ensure adequate ventilation. Use personal protective equipment as required. Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak.
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Methods and material for containment and cleaning up

Methods for containment	Prevent further leakage or spillage if safe to do so.
Methods for cleaning up	Pick up and transfer to properly labeled containers.

7. Handling and storage

Precautions for safe handling

Advice on safe handling	Handle in accordance with good industrial hygiene and safety practice. Avoid contact with skin, eyes or clothing. Ensure adequate ventilation. In case of insufficient ventilation, wear suitable respiratory equipment. Do not eat, drink or smoke when using this product. Take off contaminated clothing and wash before reuse.
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Conditions for safe storage, including any incompatibilities

Storage Conditions	Keep containers tightly closed in a dry, cool and well-ventilated place. Store in a cool, dry area away from potential sources of heat, open flames, sunlight or other chemicals. Protect from sunlight. Do not expose to temperatures exceeding 50 °C/122 °F. Protect from sunlight. Do not expose to temperatures exceeding 50 °C/122 °F.
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8. Exposure controls/personal protection

Control parameters

Exposure Limits	This product, as supplied, does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies.
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Biological occupational exposure limits

This product, as supplied, does not contain any hazardous materials with biological limits established by the region specific regulatory bodies.

Appropriate engineering controls

Engineering controls Showers
 Eyewash stations
 Ventilation systems.

Individual protection measures, such as personal protective equipment

Eye/face protection Wear safety glasses with side shields (or goggles).

Hand protection Wear suitable gloves.

Gloves			
Duration of contact	PPE - Glove material	Glove thickness	Break through time
	Nitrile rubber	0.4 mm	60 minutes
	Butyl rubber	0.4 mm	60 minutes

Skin and body protection Wear suitable protective clothing.

Respiratory protection No protective equipment is needed under normal use conditions. If exposure limits are exceeded or irritation is experienced, ventilation and evacuation may be required.

General hygiene considerations Handle in accordance with good industrial hygiene and safety practice.

9. Physical and chemical properties

Information on basic physical and chemical properties

Physical state Solid
Appearance Powder, crystalline
Color yellow
Odor Odorless
Odor threshold No information available

<u>Property</u>	<u>Values</u>	<u>Remarks • Method</u>
pH	Not applicable	
Melting point / freezing point	131.4 °C / 268.5 °F	
Boiling point / boiling range	No data available	
Flash point	No data available	None known
Evaporation rate	No data available	
Flammability (solid, gas)	No data available	
Flammability Limit in Air		
Upper flammability or explosive limits	No data available	
Lower flammability or explosive limits	40 g/m ³	
Vapor pressure	< 0 Pa	@ 20 °C
Vapor density	No data available	
Relative density	1.19	@ 21 °C
Water solubility	<0.1 mg/l	@ 20 °C
Solubility(ies)	No data available	
Partition coefficient	log Pow = 5.8	@ 22 °C
Autoignition temperature	No data available	None known
Decomposition temperature		
Kinematic viscosity	Not applicable	
Dynamic viscosity	Not applicable	

Other information

Explosive properties	No information available
Oxidizing properties	No information available
Softening point	No information available
Molecular weight	418.5 g/mol
VOC Content (%)	No information available
Liquid Density	No information available
Bulk density	~ 600 kg/m ³

10. Stability and reactivity

Reactivity	No information available.
Chemical stability	Stable under normal conditions.
Possibility of hazardous reactions	None under normal processing.
Hazardous polymerization	Polymerization can occur.
Conditions to avoid	Extremes of temperature and direct sunlight. Extremes of temperature and direct sunlight.
Incompatible materials	None known based on information supplied.
Hazardous decomposition products	None known based on information supplied.

11. Toxicological information**Information on likely routes of exposure****Product Information**

Inhalation	Specific test data for the substance or mixture is not available.
Eye contact	Specific test data for the substance or mixture is not available.
Skin contact	May cause sensitization by skin contact. Specific test data for the substance or mixture is not available. Repeated or prolonged skin contact may cause allergic reactions with susceptible persons. (based on components). Avoid release to the environment.
Ingestion	Specific test data for the substance or mixture is not available.

Symptoms related to the physical, chemical and toxicological characteristics

Symptoms	Itching. Rashes. Hives.
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Acute toxicity**Numerical measures of toxicity****Component Information**

Chemical name	Oral LD50	Dermal LD50	Inhalation LC50
phenyl bis(2,4,6-trimethylbenzoyl)-phos phine oxide 162881-26-7	> 2000 mg/kg (Rat)	> 2000 mg/kg (Rat)	-

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Skin corrosion/irritation No information available.

Component Information	
phenyl bis(2,4,6-trimethylbenzoyl)-phosphine oxide (162881-26-7)	
Method	OECD Test No. 404: Acute Dermal Irritation/Corrosion
Species	Rabbit
Exposure route	Dermal
Effective dose	0.5 g
Exposure time	4 hours
Results	edema 0 erythema non-irritant

Serious eye damage/eye irritation No information available.

Component Information	
phenyl bis(2,4,6-trimethylbenzoyl)-phosphine oxide (162881-26-7)	
Method	OECD Test No. 405: Acute Eye Irritation/Corrosion
Species	Rabbit
Exposure route	Eye
Effective dose	0.1 mL
Exposure time	72 hours
Results	non-irritant

Respiratory or skin sensitization May cause sensitization by skin contact.

Component Information	
phenyl bis(2,4,6-trimethylbenzoyl)-phosphine oxide (162881-26-7)	
Method	OECD Test No. 406: Skin Sensitization
Species	Guinea pig
Exposure route	Injection
Results	Sensitizing

Germ cell mutagenicity No information available.

Component Information	
phenyl bis(2,4,6-trimethylbenzoyl)-phosphine oxide (162881-26-7)	
Method	OECD Test No. 471: Bacterial Reverse Mutation Test
Species	in vitro
Results	Negative

Method	OECD Test No. 473: In vitro Mammalian Chromosome Aberration Test
Species	in vitro
Results	Negative

Carcinogenicity No information available.

Reproductive toxicity No information available.

Component Information	
phenyl bis(2,4,6-trimethylbenzoyl)-phosphine oxide (162881-26-7)	
Method	OECD Test No. 414: Prenatal Development Toxicity Study
Species	Rat
Results	Developmental toxicity NOAEL \geq 1000 mg/kg bw/day

STOT - single exposure No information available.

STOT - repeated exposure No information available.

Component Information	
phenyl bis(2,4,6-trimethylbenzoyl)-phosphine oxide (162881-26-7)	
Method	OECD Test No. 407: Repeated Dose 28-day Oral Toxicity Study in Rodents

Species	Rat
Exposure route	Oral
Exposure time	28 days
Results	NOAEL 1000 mg/kg bw/day

Method	OECD Test No. 408: Repeated Dose 90-Day Oral Toxicity Study in Rodents
Species	Rat
Exposure route	Oral
Exposure time	92 - 93 days
Results	NOEL 300 mg/kg bw/day

Aspiration hazard No information available.

Other adverse effects No information available.

Interactive effects No information available.

12. Ecological information

Ecotoxicity May cause long lasting harmful effects to aquatic life.

Product Information				
Chemical name	Algae/aquatic plants	Fish	Toxicity to microorganisms	Crustacea
phenyl bis(2,4,6-trimethylbenzoyl)-phosphine oxide 162881-26-7	EC50 > 0.26 mg/L (72h, <i>Desmodesmus subspicatus</i>) NOEC > 0.26 mg/L (72h, <i>Desmodesmus subspicatus</i>)	LC50 > 0.09 mg/L (96h, <i>Danio rerio</i>) NOEC > 0.09 mg/L (96h, <i>Danio rerio</i>)	EC50 > 100 mg/l (3h, Activated sludge)	EC50 > 1.175 mg/L (48h, <i>Daphnia magna</i>)

Persistence and degradability No information available.

Component Information
phenyl bis(2,4,6-trimethylbenzoyl)-phosphine oxide (162881-26-7)

Method	Exposure time	Value	Results
OECD Test No. 301B: Ready Biodegradability: CO2 Evolution Test (TG 301 B)	28 days	Biodegradation 1%	Not readily biodegradable

Bioaccumulation There is no data for this product.

Component Information

Chemical name	Partition coefficient
phenyl bis(2,4,6-trimethylbenzoyl)-phosphine oxide 162881-26-7	5.8

Other adverse effects No information available.

13. Disposal considerations

Waste treatment methods

Waste from residues/unused products Dispose of in accordance with local regulations. Dispose of waste in accordance with environmental legislation.

Contaminated packaging Do not reuse empty containers.

14. Transport information

<u>DOT</u>	Not regulated
<u>TDG</u>	Not regulated
<u>MEX</u>	Not regulated
<u>ICAO (air)</u>	Not regulated
<u>IATA</u>	Not regulated
<u>IMDG</u>	Not regulated
<u>RID</u>	Not regulated

15. Regulatory information

International Inventories

*Contact supplier for details. One or more substances in this product are either not listed on the US TSCA inventory, listed on the confidential US TSCA inventory or are otherwise exempted from inventory listing requirements

Chemical name	AICS	DSL	NDSL	EINECS	ELINCS	ENCS	IECSC	KECL	NZIoC	PICCS	TCSI	TSCA
phenyl bis(2,4,6-trimeth ylbenzoyl)-phosp hine oxide 162881-26-7	X	X	-	-	X	X	X	X	X	X	X	X

Please note that the presence of a substance on an Inventory is not an indication that the substance can be supplied to that country. Additional registration (REACH, K-REACH, ...) might be required.

Legend:

X - Listed

CBI - Confidential Business Information

EU-LVE - Low Volume exemption < 1T

LCP - Low concern polymer

PMN - indicates a commenced PMN substance

S - indicates a substance that is identified in a final Significant New Use Rule

US-LVE - Low volume exemption < 10 T annually of the active substance

US-PE - Polymer Exemption

AICS - Australian Inventory of Chemical Substances

DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List

EINECS/ELINCS - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances

ENCS - Japan Existing and New Chemical Substances

IECSC - China Inventory of Existing Chemical Substances

KECL - Korean Existing and Evaluated Chemical Substances

NZIoC - New Zealand Inventory of Chemicals

PICCS - Philippines Inventory of Chemicals and Chemical Substances

TCSI - Taiwan Chemical Substance Inventory

TSCA - Toxic Substances Control Act Frank R. Lautenberg Chemical Safety for the 21st Century Act (active rule)

US Federal Regulations

SARA 313

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372.

SARA 311/312 Hazard Categories

Should this product meet EPCRA 311/312 Tier reporting criteria at 40 CFR 370, refer to Section 2 of this SDS for appropriate classifications.

CWA (Clean Water Act)

This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42).

CERCLA

This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355). There may be specific reporting requirements at the local, regional, or state level pertaining to releases of this material.

US State Regulations**California Proposition 65**

This product does not contain any Proposition 65 chemicals.

U.S. State Right-to-Know Regulations

Chemical name	New Jersey	Massachusetts	Pennsylvania
n-Heptane 142-82-5	X	X	X

U.S. EPA Label Information

EPA Pesticide Registration Number Not applicable

16. Other information**Key or legend to abbreviations and acronyms used in the safety data sheet****Legend Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION**

TWA	TWA (time-weighted average)	STEL	STEL (Short Term Exposure Limit)
Ceiling	Maximum limit value	*	Skin designation

Key literature references and sources for data used to compile the SDS

Agency for Toxic Substances and Disease Registry (ATSDR)
 U.S. Environmental Protection Agency ChemView Database
 European Food Safety Authority (EFSA)
 EPA (Environmental Protection Agency)
 Acute Exposure Guideline Level(s) (AEGL(s))
 U.S. Environmental Protection Agency Federal Insecticide, Fungicide, and Rodenticide Act
 U.S. Environmental Protection Agency High Production Volume Chemicals
 Food Research Journal
 Hazardous Substance Database
 International Uniform Chemical Information Database (IUCLID)
 Japan GHS Classification
 Australia National Industrial Chemicals Notification and Assessment Scheme (NICNAS)
 NIOSH (National Institute for Occupational Safety and Health)
 National Library of Medicine's ChemID Plus (NLM CIP)
 National Library of Medicine's PubMed database (NLM PUBMED)

National Toxicology Program (NTP)

New Zealand's Chemical Classification and Information Database (CCID)

Organization for Economic Co-operation and Development Environment, Health, and Safety Publications

Organization for Economic Co-operation and Development High Production Volume Chemicals Program

Organization for Economic Co-operation and Development Screening Information Data Set

World Health Organization

Issuing Date 21-Sep-2020

Revision date 29-Jan-2021

Revision Note No information available.

Disclaimer

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.

End of Safety Data Sheet