

OPTIC 2401 EX 1GP

SAFETY DATA SHEET

1. Identification

Product identifier: OPTIC 2401 EX 1GP

Other means of identification

Synonyms: Silicone Coating

Recommended use and restriction on use

Recommended use: Industrial use

Restrictions on use: Not known.

Manufacturer/Importer/Distributor Information : Momentive Performance Materials LLC
260 Hudson River Road
Waterford NY 12188

Contact person : commercial.services@momentive.com

Telephone : General information
+1-800-295-2392

Emergency telephone number

Supplier : CHEMTREC
1-800-424-9300

2. Hazard(s) identification

Hazard Classification

Physical Hazards

Flammable liquids Category 3

Health Hazards

Toxic to reproduction Category 2

Unknown toxicity - Health

Acute toxicity, oral	0 %
Acute toxicity, dermal	0 %
Acute toxicity, inhalation, vapor	0 %
Acute toxicity, inhalation, dust or mist	0 %

Label Elements

Hazard Symbol:

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Signal Word: Warning

Hazard Statement: H226; Flammable liquid and vapour.
H361; Suspected of damaging fertility or the unborn child.

Precautionary Statements

Prevention: Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Keep container tightly closed. Ground and bond container and receiving equipment. Use explosion-proof [electrical/ventilating/lighting/...] equipment. Use non-sparking tools. Take action to prevent static discharges. Wear protective gloves/protective clothing/eye protection/face protection. Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Use personal protective equipment as required.

Response: IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower]. IF exposed or concerned: Get medical advice/attention. In case of fire: Use dry chemical powder for extinction.

Storage: Store in a well-ventilated place. Keep cool. Store locked up.

Disposal: Dispose of contents/container to an appropriate treatment and disposal facility in accordance with applicable laws and regulations, and product characteristics at time of disposal.

Other hazards which do not result in GHS classification: None.

Substance(s) formed under the conditions of use: Generates methanol during cure.

3. Composition/information on ingredients

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Mixtures

Chemical Identity	CAS number	Content in percent (%)*	Notes
Solvent Naphtha	64742-88-7	20 - <50%	# This substance has workplace exposure limit(s).
Titanium, Bis(ethyl acetoacetato)-diisopropoxy	27858-32-8	1 - <5%	No data available.
Octamethylcyclotetrasiloxane	556-67-2	0.1 - <1%	No data available.

* All concentrations are percent by weight unless ingredient is a gas. Gas concentrations are in percent by volume.

4. First-aid measures

Ingestion:	DO NOT induce vomiting. Get medical attention immediately. Do not give victim anything to drink if he is unconscious. If vomiting occurs, keep head low so that stomach content doesn't get into the lungs.
Inhalation:	Move into fresh air and keep at rest. Get medical attention if symptoms occur.
Skin Contact:	Remove contaminated clothing and shoes. Wash skin thoroughly with soap and water. Get medical attention if symptoms occur.
Eye contact:	Get medical attention if symptoms occur. If in eyes, hold eyes open, flood with water for at least 15 minutes and see a doctor.

Most important symptoms/effects, acute and delayed

Symptoms:	None known.
Hazards:	No data available.

Indication of immediate medical attention and special treatment needed

Treatment:	Treatment is symptomatic and supportive. This product reacts with moisture in the acid contents of the stomach to form methanol.
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5. Fire-fighting measures

General Fire Hazards:	Do not use water jet as an extinguisher, as this will spread the fire. Use water spray to keep fire-exposed containers cool.
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Suitable (and unsuitable) extinguishing media

Suitable extinguishing media:	All standard extinguishing agents are suitable.
Unsuitable extinguishing media:	No data available.

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Specific hazards arising from the chemical: Vapors are flammable and heavier than air. Vapors may travel across the ground and reach remote ignition sources causing a flashback fire danger. Ground container and transfer equipment to eliminate static electric sparks.

Special protective equipment and precautions for firefighters

Special fire fighting procedures: Keep away from sources of ignition - No smoking. Take precautionary measures against static discharges. Product may charge electrostatically during pouring or filling. All equipment used when handling the product must be grounded.

Special protective equipment for fire-fighters: Firefighters must wear NIOSH/MSHA approved positive pressure self-contained breathing apparatus with full face mask and full protective clothing.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures: Avoid contact with eyes, skin, and clothing. Keep out of reach of children. Attention: Not for injection into humans.

Methods and material for containment and cleaning up: Warn other workers of spill. Wear proper protective equipment as specified in the protective equipment section. Wipe, scrape, or soak up in an inert material and put in a container intended for flammable materials for disposal.

Notification Procedures: ELIMINATE all ignition sources (no smoking, flares, sparks or flames in immediate area).

Environmental Precautions: Avoid discharge into drains, water courses or onto the ground.

7. Handling and storage

Precautions for safe handling: Sensitivity to static discharge is expected; material has a flash point below 200 F. Do not breathe vapor/spray. Do not taste or swallow. Avoid contact with eyes, skin, and clothing. See Section 8 of the SDS for Personal Protective Equipment. Wash hands after handling. Material can accumulate static charges which may cause an electrical spark (ignition source). Use proper bonding and/or grounding procedures.

Conditions for safe storage, including any incompatibilities: Keep away from heat, sparks and open flame. Keep container closed. Store in original container.

8. Exposure controls/personal protection

Control Parameters
Occupational Exposure Limits

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Chemical Identity	Type	Exposure Limit Values	Source
Solvent Naphtha - Non-aerosol. - as total hydrocarbon vapor	TWA	200 mg/m3	US. ACGIH Threshold Limit Values (03/2015)
Solvent Naphtha	REL	100 mg/m3	US. NIOSH: Pocket Guide to Chemical Hazards (2010)
Octamethylcyclotetrasiloxane	TWA	5 ppm	
Chemical Identity	Type	Exposure Limit Values	Source
Solvent Naphtha - Non-aerosol. - as total hydrocarbon vapor	TWA	200 mg/m3	US. ACGIH Threshold Limit Values (03/2015)
Solvent Naphtha	REL	100 mg/m3	US. NIOSH: Pocket Guide to Chemical Hazards (2010)

Appropriate Engineering Controls

Eye wash facilities and emergency shower must be available when handling this product. Ventilation and other forms of engineering controls are preferred for controlling exposures. Respiratory protection may be needed for non-routine or emergency situations.

Individual protection measures, such as personal protective equipment

General information:	General (mechanical) room ventilation is expected to be satisfactory if handled at low temperatures or in covered equipment.
Eye/face protection:	Safety glasses with side shields
Skin Protection	
Hand Protection:	Chemical resistant gloves
Other:	Wear suitable protective clothing and eye/face protection.
Respiratory Protection:	Use only in well-ventilated areas. If exposure limits are exceeded or respiratory irritation is experienced, NIOSH/MSHA approved respiratory protection should be worn. Supplied air respirators may be required for non-routine or emergency situations. Respiratory protection must be provided in accordance with OSHA regulations (see 29CFR 1910.134).
Hygiene measures:	Observe good industrial hygiene practices. Wash hands after handling. When using do not eat, drink or smoke. Provide adequate ventilation.

9. Physical and chemical properties

Appearance

Physical state:	liquid
Form:	No data available.
Color:	Colorless
Odor:	Faint
Odor threshold:	No data available.

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pH:	not applicable
Melting point/freezing point:	No data available.
Initial boiling point and boiling range:	ca. 156 °C
Flash Point:	55 °C
Evaporation rate:	> 1
Flammability (solid, gas):	No data available.
Upper/lower limit on flammability or explosive limits	
Flammability limit - upper (%):	6.0 %(V)
Flammability limit - lower (%):	1.0 %(V)
Explosive limit - upper (%):	No data available.
Explosive limit - lower (%):	No data available.
Heat of combustion:	No data available.
Vapor pressure:	No data available.
Vapor density:	No data available.
Density:	ca. 1.03 g/cm ³
Relative density:	ca. 1.03
Solubility(ies)	
Solubility in water:	Insoluble
Solubility (other):	Soluble in Petroleum Distillate
Partition coefficient (n-octanol/water) Log Pow:	No data available.
Auto-ignition temperature:	232 °C
Decomposition temperature:	No data available.
SADT:	No data available.
Viscosity, dynamic:	20,500 mPa·s (40 °C)
Viscosity, kinematic:	19,902 mm ² /s (40 °C, calculated)
VOC:	238 g/l ;

10. Stability and reactivity

Reactivity:	No dangerous reaction if used as recommended.
Chemical Stability:	Material is unstable under normal conditions.
Possibility of hazardous reactions:	Hazardous polymerisation does not occur.
Conditions to avoid:	Keep away from sources of ignition - No smoking.
Incompatible Materials:	Oxidizing agents.

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**Hazardous Decomposition
Products:**

Carbon oxides Oxides of silicon. Measurements at temperatures above 150°C in presence of air (oxygen) have shown that small amounts of formaldehyde are formed due to oxidative degradation. Generates methanol during cure.

11. Toxicological information

Information on likely routes of exposure

Ingestion: No data available.

Inhalation: No data available.

Skin Contact: No data available.

Eye contact: No data available.

Symptoms related to the physical, chemical and toxicological characteristics

Ingestion: No data available.

Inhalation: No data available.

Skin Contact: No data available.

Eye contact: No data available.

Information on toxicological effects

Acute toxicity (list all possible routes of exposure)

Oral

Product: Not classified for acute toxicity based on available data.

Specified substance(s):

Octamethylcyclotetrasiloxane LD 50 (Rat): 4,800 mg/kg

Dermal

Product: Not classified for acute toxicity based on available data.

Specified substance(s):

Octamethylcyclotetrasiloxane LD 50 (Rat): > 2,400 mg/kg

Inhalation

Product: Not classified for acute toxicity based on available data.

Specified substance(s):

Octamethylcyclotetrasiloxane LC50 (Rat): 36 mg/l

Repeated dose toxicity

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Product: No data available.

Skin Corrosion/Irritation

Product: No data available.

Serious Eye Damage/Eye Irritation

Product: No data available.

Respiratory or Skin Sensitization

Product: No data available.

Carcinogenicity

Product: No data available.

IARC Monographs on the Evaluation of Carcinogenic Risks to Humans:

No carcinogenic components identified

US. National Toxicology Program (NTP) Report on Carcinogens:

No carcinogenic components identified

US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050):

No carcinogenic components identified

Germ Cell Mutagenicity

In vitro

Product: No data available.

Specified substance(s):

Octamethylcyclotetrasiloxane
Ames-Test (OECD-Guideline 471 (Genetic Toxicology: Salmonella typhimurium, Reverse Mutation Assay)): negative (not mutagenic)
Mouse Lymphoma Assay (OECD Guideline 476): negative (not mutagenic)

In vivo

Product: No data available.

Specified substance(s):

Octamethylcyclotetrasiloxane
Chromosomal aberration (OECD-Guideline 474 (Genetic Toxicology: Micronucleus Test)) Inhalation (Rat, male and female): negative

Reproductive toxicity

Product: No data available.

Specific Target Organ Toxicity - Single Exposure

Product: No data available.

Specific Target Organ Toxicity - Repeated Exposure

Product: No data available.

Aspiration Hazard

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Product: No data available.

Other effects: None.

12. Ecological information

Ecotoxicity:

Acute hazards to the aquatic environment:

Fish

Product: No data available.

Aquatic Invertebrates

Product: No data available.

Chronic hazards to the aquatic environment:

Fish

Product: No data available.

Aquatic Invertebrates

Product: No data available.

Toxicity to Aquatic Plants

Product: No data available.

Persistence and Degradability

Biodegradation

Product: No data available.

Specified substance(s):

Octamethylcyclotetrasiloxane 3.7 % (29 d, 310 Ready Biodegradability - CO₂ in Sealed Vessels (Headspace Test)) Not readily biodegradable.

BOD/COD Ratio

Product: No data available.

Bioaccumulative potential

Bioconcentration Factor (BCF)

Product: No data available.

Specified substance(s):

Octamethylcyclotetrasiloxane Fathead Minnow, Bioconcentration Factor (BCF): 12.40

Partition Coefficient n-octanol / water (log K_{ow})

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Product: No data available.

Mobility in soil: No data available.

Known or predicted distribution to environmental compartments

Solvent Naphtha	No data available.
Titanium, Bis(ethyl acetoacetato)-diispropoxy	No data available.
Octamethylcyclotetrasiloxane	No data available.

Other adverse effects: No data available.

13. Disposal considerations

General information: The generation of waste should be avoided or minimized wherever possible. Do not discharge into drains, water courses or onto the ground. See Section 8 for information on appropriate personal protective equipment.

Disposal instructions: Disposal should be made in accordance with federal, state and local regulations.

Contaminated Packaging: Dispose of as unused product.

14. Transport information

DOT

UN Number:	UN 1993
UN Proper Shipping Name:	Flammable liquids, n.o.s. (Solvent Naphtha, METHYLTRIMETHOXY SILANE)
Transport Hazard Class(es)	
Class:	3
Label(s):	3
Packing Group:	III
Marine Pollutant:	No

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IMDG

UN Number:	UN 1993
UN Proper Shipping Name:	FLAMMABLE LIQUID, N.O.S.(Solvent Naphtha, METHYLTRIMETHOXYSilane)
Transport Hazard Class(es)	
Class:	3
Label(s):	3
EmS No.:	F-E, S-E
Packing Group:	III
Marine Pollutant:	No
Limited quantity	5.00L
Excepted quantity	E1

IATA

UN Number:	UN 1993
Proper Shipping Name:	Flammable liquid, n.o.s.(Solvent Naphtha, METHYLTRIMETHOXYSilane)
Transport Hazard Class(es):	
Class:	3
Label(s):	3
Packing Group:	III
Cargo aircraft only Packing	366
Instructions:	
Passenger and cargo aircraft	366
Packing Instructions:	
Limited quantity:	10.00L
Packing Instructions:	Y344
Excepted quantity	E1
Environmental Hazards:	Not regulated.
Marine Pollutant:	No
Special precautions for user:	Flammable

15. Regulatory information

US Federal Regulations

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)

None present or none present in regulated quantities.

CERCLA Hazardous Substance List (40 CFR 302.4):

None present or none present in regulated quantities.

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Hazard categories

Fire Hazard

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Delayed (Chronic) Health Hazard
Fire Hazard
Delayed (Chronic) Health Hazard
Flammable liquids
Toxic to reproduction
Static-accumulating flammable liquid

SARA 302 Extremely Hazardous Substance

None present or none present in regulated quantities.

SARA 304 Emergency Release Notification

None present or none present in regulated quantities.

SARA 311/312 Hazardous Chemical

<u>Chemical Identity</u>	<u>Threshold Planning Quantity</u>
Solvent Naphtha	10000 lbs
Titanium, Bis(ethyl acetoacetato)-diispropoxy	10000 lbs
Octamethylcyclotetrasiloxane	10000 lbs

SARA 313 (TRI Reporting)

None present or none present in regulated quantities.

Clean Water Act Section 311 Hazardous Substances (40 CFR 117.3)

None present or none present in regulated quantities.

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130):

None present or none present in regulated quantities.

US State Regulations

US. California Proposition 65

This product contains chemical(s) known to the State of California to cause cancer and/or to cause birth defects or other reproductive harm.

Methanol	Maximum Allowable Dose Level (MADL): 47000 µg/day. Developmental toxin.
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US. New Jersey Worker and Community Right-to-Know Act

<u>Chemical Identity</u>
Siloxanes and Silicones, di-Me hydroxy terminated
Solvent Naphtha
Silanamine, 1,1,1-trimethyl-N-(trimethylsilyl) -, reaction products with ammonia, octamethylcyclotetrasiloxane and silica
Decamethylcyclopentasiloxane
Methyltrimethoxysilane
Titanium, Bis(ethyl acetoacetato)-diispropoxy
Octamethylcyclotetrasiloxane

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US. Massachusetts RTK - Substance List

Chemical Identity

Solvent Naphtha

US. Pennsylvania RTK - Hazardous Substances

Chemical Identity

Solvent Naphtha

US. Rhode Island RTK

Chemical Identity

Solvent Naphtha

Inventory Status:

Australia AICS:	n (Negative listing)	Remarks: None.
EU EINECS List:	y (positive listing)	Remarks: None.
Japan (ENCS) List:	y (positive listing)	Remarks: None.
China Inventory of Existing Chemical Substances:	n (Negative listing)	Remarks: None.
Korea Existing Chemicals Inv. (KECI):	y (positive listing)	Remarks: None.
Canada DSL Inventory List:	y (positive listing)	Remarks: None.
Canada NDSL Inventory:	n (Negative listing)	Remarks: None.
Philippines PICCS:	n (Negative listing)	Remarks: None.
US TSCA Inventory:	y (positive listing)	Remarks: On TSCA Inventory

16. Other information, including date of preparation or last revision

HMIS Hazard ID

Health	*	0
Flammability		2
Physical Hazards		1
PERSONAL PROTECTION		

Hazard rating: 0 - Minimal; 1 - Slight; 2 - Moderate; 3 - Serious; 4 - Severe; RNP - Rating not possible; *Chronic health effect

Issue Date: 01/02/2018

Revision Date: No data available.

Version #: 3.1

Further Information: No data available.

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Disclaimer:

Notice to reader

Unless otherwise specified in section 1, Momentive products are intended for use in the manufacture and/or formulation of products and are not intended for direct consumer use. These products are not intended for long-lasting (> 30 days) implantation, injection or direct ingestion into the human body, nor for use in the manufacture of multiple use contraceptives. Keep out of the reach of children.

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 safehandling, 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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