

SAFETY DATA SHEET

1. Identification

Product identifier: TUFEL * 94406

Other means of identification

Synonyms: Platinum Catalyst Masterbatch

Recommended use and restriction on use

Recommended use: Catalyst

Mixture

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

Health Hazards

Toxic to reproduction

Category 2

Label Elements

Hazard Symbol:



Signal Word: No signal word.

TUFEL * 94406

| | |
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| Hazard Statement: | Suspected of damaging fertility. |
| Target Organs | No data available. |
| Precautionary Statement | |
| Prevention: | Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Wear protective gloves/protective clothing/eye protection/face protection. |
| Response: | IF exposed or concerned: Get medical advice/attention. |
| Storage: | 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. |

3. Composition/information on ingredients

Mixtures

| Chemical Identity | CAS number | Content in percent (%)* |
|------------------------------|------------|-------------------------|
| Octamethylcyclotetrasiloxane | 556-67-2 | 3 - 7% |

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

4. First-aid measures

| | |
|----------------------|--|
| Ingestion: | If swallowed, do NOT induce vomiting. Give a glass of water. Do not give victim anything to drink if he is unconscious. Get medical attention if any discomfort continues. |
| Inhalation: | Move to fresh air. Get medical attention if symptoms occur. |
| Skin Contact: | Wash area with soap and water. |
| Eye contact: | In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. |

Most important symptoms/effects, acute and delayed

| | |
|------------------|--|
| Symptoms: | Treatment is symptomatic and supportive. |
|------------------|--|

TUFEL * 94406

Hazards: No data available.

Indication of immediate medical attention and special treatment needed

Treatment: Treatment is symptomatic and supportive.

5. Fire-fighting measures

General Fire Hazards: No data available.

Suitable (and unsuitable) extinguishing media

Suitable extinguishing media: All standard extinguishing agents are suitable.

Unsuitable extinguishing media: No data available.

Specific hazards arising from the chemical: No data available.

Special protective equipment and precautions for firefighters

Special fire fighting procedures: No data available.

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: Curing releases vapors which may be harmful. Use only with adequate ventilation. Avoid contact with eyes. Keep out of reach of children. Attention: Not for injection into humans. May generate formaldehyde at temperatures greater than 150 C(300 F). See Section 8 of the SDS for Personal Protective Equipment.

Methods and material for containment and cleaning up: Wipe, scrape or soak up in an inert material and put in a container for disposal. Wear proper protective equipment as specified in the protective equipment section.

7. Handling and storage

Precautions for safe handling: Sensitivity to static discharge is not expected.

TUFEL * 94406

Conditions for safe storage, including any incompatibilities: No data available.

8. Exposure controls/personal protection

Control Parameters

Occupational Exposure Limits

None of the components have assigned exposure limits.

Appropriate Engineering Controls

Eye wash facilities and emergency shower must be available when handling this product.

Individual protection measures, such as personal protective equipment

General information: Do not eat, drink or smoke when using the product. Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing to remove contaminants. Discard contaminated footwear that cannot be cleaned. Avoid contact with skin and eyes.

Eye/face protection: Safety glasses with side shields

Skin Protection

Hand Protection:

Cloth gloves.

Other:

Wear suitable protective clothing and eye/face protection.

Respiratory Protection:

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: No data available.

9. Physical and chemical properties

Appearance

Physical state:

solid

Form:

Paste

Color:

Amber

Odor:

Faint

Odor threshold:

No data available.

pH:

not applicable

Melting point/freezing point:

not applicable

TUFEL * 94406

| | |
|--|-----------------------------|
| Initial boiling point and boiling range: | not applicable |
| Flash Point: | > 204 °C (Open Cup) |
| Evaporation rate: | No data available. |
| Flammability (solid, gas): | No data available. |
| Upper/lower limit on flammability or explosive limits | |
| Flammability limit - upper (%): | No data available. |
| Flammability limit - lower (%): | No data available. |
| Explosive limit - upper (%): | No data available. |
| Explosive limit - lower (%): | No data available. |
| Vapor pressure: | none |
| Vapor density: | No data available. |
| Density: | ca. 1,070 g/cm ³ |
| Relative density: | ca. 1.07 |
| Solubility(ies) | |
| Solubility in water: | Insoluble |
| Solubility (other): | No data available. |
| Partition coefficient (n-octanol/water) Log Pow: | No data available. |
| Auto-ignition temperature: | No data available. |
| Decomposition temperature: | No data available. |
| SADT: | No data available. |
| Viscosity, dynamic: | No data available. |
| Viscosity, kinematic: | No data available. |
| VOC: | No data available. |

10. Stability and reactivity

| | |
|--|---|
| Reactivity: | No data available. |
| Chemical Stability: | No data available. |
| Possibility of hazardous reactions: | Hazardous polymerisation does not occur. |
| Conditions to avoid: | Avoid temperatures greater than 100°F/37°C. |
| Incompatible Materials: | None known. |
| Hazardous Decomposition Products: | Carbon dioxide Oxides of zinc. Silicon dioxide. Measurements at temperatures above 150°C in presence of air (oxygen) have shown that small amounts of formaldehyde are formed due to oxidative degradation. |

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: No data available.

Specified substance(s):

Octamethylcyclotetrasiloxane
LD 50 (Rat): 4,800 mg/kg
LD 50 (Mouse): 1,700 mg/kg

Dermal

Product: No data available.

Specified substance(s):

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

Inhalation

Product: No data available.

Specified substance(s):

Octamethylcyclotetrasiloxane
LC50 (Rat): 12.1 mg/l
LC50 (Rat): 36 mg/l

Repeated dose toxicity

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.

Target Organs

No data available.

**Aspiration Hazard
Product:**

No data available.

Other effects:

Octamethylcyclotetrasiloxane (D4) Ingestion: Rodents given large doses via oral gavage of Octamethylcyclotetrasiloxane (1600mg/kg/day, 14 days), developed increased liver weights relative to unexposed control animals due to hepatocellular hyperplasia (increased number of liver cells which appear normal) as well as hypertrophy (increased cell size). Inhalation: In inhalation studies, laboratory rodents exposed to Octamethylcyclotetrasiloxane (300 ppm five days/week, 90 days) developed increased liver weights in female animals relative to unexposed control animals. When the exposure was stopped, liver weights returned to normal. Microscopic examination of the liver cells did not show any evidence of pathology. This response in rats, which does not affect the animal's health, is well-documented and widely recognized. It is related to an increase of liver enzymes that metabolize and eliminate a material from the body. The increased liver weight reverses even while the D4 exposure continues. The finding is not adverse, but is considered a natural adaptive change in rats, and does not represent a hazard to humans. Inhalation studies utilizing laboratory rabbits and guinea pigs showed no effects on liver weights. Inhalation exposures typical of industrial usage (5-10 ppm) showed no toxic effects in rodents. Range finding reproductive studies were conducted (whole body inhalation, 70 days prior to mating, through mating, gestation and lactation), with D4. Rats were exposed to 70 and 700 ppm. In the 700 ppm group, there was a statistically significant reduction in mean litter size and in implantation sites. No D4 related clinical signs were observed in the pups and no exposure related pathological findings were found. A two-year, combined chronic/carcinogenicity study, during which rats were exposed to D4 by inhalation, data showed a statistically significant increase in a benign uterine tumor in female rats exposed at the highest level--a level much higher than the low levels that consumers or workers may encounter. An expert panel of independent scientists who have reviewed the results of this research concur that the finding seen in the two-year study occurred through a biological pathway that is specific to the rat and is not relevant to humans. Therefore, this observed effect does not indicate a potential health hazard to humans. In developmental toxicity studies, rats and rabbits were exposed to D4 at concentrations up to 700 ppm and 500 ppm, respectively. No teratogenic effects (birth defects) were observed in either study.

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})

Product: No data available.

Mobility in Soil: No data available.

Known or predicted distribution to environmental compartments

Octamethylcyclotetrasiloxane No data available.

Known or predicted distribution to environmental compartments

Vinylpolydimethylsiloxane No data available.

Silica No data available.

Siloxanes and Silicones, di-Me, Me vinyl No data available.

Other Adverse Effects: No data available.

13. Disposal considerations

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

Not regulated.

IMDG

Not regulated.

IATA

Not regulated.

15. Regulatory information

US Federal Regulations

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

Chemical Identity

Octamethylcyclotetrasiloxane

Reportable quantity

De minimis concentration: TSCA Section: 4% One-Time Export Notification only.

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

| <u>Chemical Identity</u> | <u>OSHA hazard(s)</u> |
|------------------------------|-----------------------|
| Vinylpolydimethylsiloxane | No OSHA Hazards |
| Octamethylcyclotetrasiloxane | Systemic effects |

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

Delayed (Chronic) Health Hazard

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> |
|------------------------------|------------------------------------|
| 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

No ingredient regulated by CA Prop 65 present.

US. New Jersey Worker and Community Right-to-Know Act

No ingredient regulated by NJ Right-to-Know Law present.

US. Massachusetts RTK - Substance List

No ingredient regulated by MA Right-to-Know Law present.

US. Pennsylvania RTK - Hazardous Substances

No ingredient regulated by PA Right-to-Know Law present.

TUFEL * 94406

US. Rhode Island RTK

No ingredient regulated by RI Right-to-Know Law present.

Inventory Status:

| | | |
|--|----------------------|----------------------------|
| Australia AICS: | y (positive 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: | y (positive 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: | y (positive listing) | Remarks: None. |
| US TSCA Inventory: | y (positive listing) | Remarks: On TSCA Inventory |
| Taiwan. Taiwan inventory (CSNN): | y (positive listing) | Remarks: None. |

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

HMIS Hazard ID

| | | |
|----------------------------|----------|----------|
| Health | * | 1 |
| Flammability | | 1 |
| Physical Hazards | | 0 |
| PERSONAL PROTECTION | | |

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

Issue Date: 07/07/2016

Revision Date: No data available.

Version #: 1.4

Further Information: No data available.

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 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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