SECTION 1: CHEMICAL IDENTIFIER AND COMPANY IDENTIFICATION

Product Identifier
Product Form : Mixture
Product Name : SWAK™

Relevant Identified Uses Of The Substance Or Mixture And Uses Advised Against
Use Of The Substance/Mixture : Anaerobic pipe thread sealant

Details Of The Supplier Of The Safety Data Sheet
Company
Swagelok Manufacturing Company, LLC
29495 F.A. Lennon Drive
Solon, Ohio 44139
440-519-4000
www.swagelok.com

Manufacturer
Swagelok Manufacturing Company, LLC
29495 F.A. Lennon Drive
Solon, Ohio 44139
440-519-4000
www.swagelok.com

Emergency Telephone Number
Emergency number : CHEMTREC: (800) 424-9300

SECTION 2: HAZARDS IDENTIFICATION

Classification Of The Substance Or Mixture
GHS-JP Classification
Health hazards : Skin corrosion/irritation Category 2
: Serious eye damage/eye irritation Category 2
: Skin sensitization Category 1
: Specific target organ toxicity (single exposure) Category 3

Environmental hazards : Hazardous to the aquatic environment - Chronic Hazard Category 4

Label Elements
Hazard Pictograms (GHS-JP) :

Signal Word (GHS-JP) : Warning
Hazard Statements (GHS-JP) : Causes skin irritation (H315).
: May cause an allergic skin reaction (H317).
: Causes serious eye irritation (H319).
: May cause respiratory irritation (H335).
: May cause long lasting harmful effects to aquatic life (H413).

Prevention Precautionary Statements :
Avoid breathing vapors, mist, or spray (P261).
Wash hands, forearms, and other exposed areas thoroughly after handling (P264).
Use only outdoors or in a well-ventilated area (P271).
Contaminated work clothing should not be allowed out of the workplace (P272).
Avoid release to the environment (P273).
Wear protective gloves, protective clothing, and eye protection (P280).

Response Precautionary Statements :
IF ON SKIN: Wash with plenty of soap and water (P302+P352).
If inhaled, remove to fresh air and keep at rest in a position comfortable for breathing (P304+P340).
If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing (P305+P351+P338).
Call a POISON CENTER or doctor/physician if you feel unwell (P312).
Specific treatment (see section 4 on this SDS) (P321).
If on skin and if skin irritation occurs, seek medical advice and attention (P332+P313).
If on skin and if skin irritation or rash occurs, seek medical advice and attention (P333+P313).
If eye irritation persists: Get medical advice/attention (P337+P313).
Take off contaminated clothing and wash it before reuse (P362+P364).
Storage Precautionary Statements: Store in a well-ventilated place. Keep container tightly closed (P403+P233). Store locked up (P405).

Disposal Precautionary Statements: Dispose of contents/container in accordance with local, regional, national, and international regulations (P501).

Other Hazards:
Other Hazards Not Contributing To The Classification: Exposure may aggravate pre-existing eye, skin, or respiratory conditions. Inhalation of fumes from overheating "TEFLON" PTFE may cause polymer fume fever, a temporary flu-like illness with fever, chills and sometimes cough, of approximately 24 hours duration. This material contains an organic peroxide. Heating may cause hazardous decomposition. Hazardous decomposition products from peroxides are flammable and can be explosive under confinement. Dust is not expected to be generated, however, repeated or prolonged exposure to titanium dioxide dust via inhalation is suspected of causing cancer of the respiratory tract. Due to the product’s final form, combustible dusts are not likely to be generated, however if small particles are generated during further processing, handling or by other means, may form combustible dust concentrations in air.

### SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>Name</th>
<th>Concentration</th>
<th>Formula</th>
<th>Kanpo Number</th>
<th>CAS No</th>
</tr>
</thead>
<tbody>
<tr>
<td>Polyethylene glycol</td>
<td>1 - 5%</td>
<td>(C2H4O)nH2O</td>
<td>(8)-429;(7)-129;(2)-441</td>
<td>25322-68-3</td>
</tr>
<tr>
<td>Titanium dioxide</td>
<td>1 - 5%</td>
<td>O2Ti</td>
<td>(5)-5225;(1)-558</td>
<td>13463-67-7</td>
</tr>
<tr>
<td>Polytetrafluoroethylene</td>
<td>30 - 40%</td>
<td>(C2F4)x</td>
<td>(6)-939</td>
<td>9002-84-0</td>
</tr>
<tr>
<td>Poly(oxy-1,2-ethanediyl),.alpha,.alpha.-(1-methyleneethylenedi)di-4,1-phenylene]bis[.omega.-(2-methyl-1-oxo-2-propenyl]oxy]-</td>
<td>30 - 40%</td>
<td>(C2H4O)n(C2H4O)nC23H24O4</td>
<td>(7)-1434</td>
<td>41637-38-1</td>
</tr>
<tr>
<td>Silica, amorphous, fumed, crystalline-free</td>
<td>&lt; 1%</td>
<td>Unspecified</td>
<td>(1)-548</td>
<td>112945-52-5</td>
</tr>
<tr>
<td>Cumene hydroperoxide</td>
<td>&lt; 1%</td>
<td>C9H12O2</td>
<td>(3)-1014</td>
<td>80-15-9</td>
</tr>
<tr>
<td>Particulates not otherwise classified (PNOC)</td>
<td></td>
<td>Unspecified</td>
<td></td>
<td>Not applicable</td>
</tr>
</tbody>
</table>

### SECTION 4: FIRST-AID MEASURES

**Description Of First Aid Measures**

First-Aid Measures General: Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice (show the label where possible).

First-Aid Measures After Inhalation: When symptoms occur: go into open air and ventilate suspected area. Obtain medical attention if breathing difficulty persists.

First-Aid Measures After Skin Contact: Remove contaminated clothing. Drench affected area with water for at least 15 minutes. Obtain medical attention if irritation develops or persists.

First-Aid Measures After Eye Contact: Rinse cautiously with water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Obtain medical attention.

First-Aid Measures After Ingestion: Rinse mouth. Do NOT induce vomiting. Obtain medical attention.

Personal Protection In First Aid And Measures: Do not enter fire area without proper protective equipment, including respiratory protection.

**Most Important Symptoms And Effects, Both Acute And Delayed**

Symptoms/Injures: Causes eye irritation. Causes skin irritation. May cause respiratory irritation. Skin sensitization.

Symptoms/Injures After Inhalation: Irritation of the respiratory tract and the other mucous membranes.
Symptoms/Injuries After Skin Contact: Redness, pain, swelling, itching, burning, dryness, and dermatitis. May cause an allergic skin reaction.

Symptoms/Injuries After Eye Contact: Contact causes severe irritation with redness and swelling of the conjunctiva.

Symptoms/Injuries After Ingestion: Ingestion may cause adverse effects.

Indication Of Any Immediate Medical Attention And Special Treatment Needed
If exposed or concerned, get medical advice and attention. If medical advice is needed, have product container or label at hand.

SECTION 5: FIRE-FIGHTING MEASURES

Extinguishing Media
Suitable Extinguishing Media: Use extinguishing media appropriate for surrounding fire.

Unsuitable Extinguishing Media: Do not use a heavy water stream. Use of heavy stream of water may spread fire.

Special Hazards Arising From The Substance Or Mixture
Fire Hazard: Contains substances that are combustible dusts. If dried and allowed to accumulate, may form combustible dust concentrations in air that could ignite and cause an explosion. Take appropriate precautions.

Explosion Hazard: Product itself is not explosive but if dust is generated, dust clouds suspended in air can be explosive.

Reactivity: This material contains an organic peroxide. Heating may cause hazardous decomposition. Hazardous decomposition products from peroxides are flammable and can be explosive under confinement.

Advice For Firefighters
Precautionary Measures Fire: Exercise caution when fighting any chemical fire.

Firefighting Instructions: Use water spray or fog for cooling exposed containers.

Protection During Firefighting: Do not enter fire area without proper protective equipment, including respiratory protection.

Other Information: Do not allow run-off from fire fighting to enter drains or water courses.

SECTION 6: ACCIDENTAL RELEASE MEASURES

Personal Precautions, Protective Equipment And Emergency Procedures
General Measures: Avoid breathing (vapor, mist, spray). Do not get in eyes, on skin, or on clothing.

Avoid generating dust. Remove ignition sources. Keep away from heat, hot surfaces, sparks, open flames, and other ignition sources. No smoking.

For Non-Emergency Personnel
Protective Equipment: Use appropriate personal protection equipment (PPE).


For Emergency Responders
Protective Equipment: Equip cleanup crew with proper protection.

Emergency Procedures: Upon arrival at the scene, a first responder is expected to recognize the presence of dangerous goods, protect oneself and the public, secure the area, and call for the assistance of trained personnel as soon as conditions permit. Ventilate area.

Environmental Precautions
Prevent Entry To Sewers And Public Waters. Avoid Release To The Environment.

Methods And Material For Containment And Cleaning Up
For Containment: Contain any spills with dikes or absorbents to prevent migration and entry into sewers or streams. Avoid generation of dust during clean-up of spills.

Methods For Cleaning Up: Clean up spills immediately and dispose of waste safely. Absorb and/or contain spill with inert material. Contact competent authorities after a spill.

Reference To Other Sections
See Section 8 For Exposure Controls And Personal Protection And Section 13 For Disposal Considerations.
SECTION 7: HANDLING AND STORAGE PRECAUTIONS

Precautions For Safe Handling
Additional Hazards When Processed: Keep away from heat, sparks, open flames, hot surfaces. – No smoking. This material contains an organic peroxide. Heating may cause hazardous decomposition. Hazardous decomposition products from peroxides are flammable and can be explosive under confinement. Inhalation of fumes from overheating "TEFLON" PTFE may cause polymer fume fever, a temporary flu-like illness with fever, chills and sometimes cough, of approximately 24 hours duration.

Precautions For Safe Handling: Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Avoid breathing vapors, mist, spray. Avoid contact with eyes, skin and clothing. Avoid creating or spreading dust. Keep away from heat, sparks, open flames, hot surfaces. – No smoking.

Hygiene Measures: Handle in accordance with good industrial hygiene and safety procedures.

Conditions For Safe Storage, Including Any Incompatibilities
Technical Measures: Comply with applicable regulations. Avoid creating or spreading dust. Use explosion-proof electrical, ventilating, lighting equipment. Proper grounding procedures to avoid static electricity should be followed.

Storage Conditions: Keep container closed when not in use. Store in a dry, cool place. Keep/Store away from direct sunlight, extremely high or low temperatures and incompatible materials.

Incompatible Materials: Strong acids, strong bases, strong oxidizers, amines, active metals, ammonia, combustible materials, reducing agents, pure oxygen, oxygen scavengers, peroxides.

Specific End Use(S)
Anaerobic pipe thread sealant

SECTION 8: EXPOSURE CONTROLS AND PERSONAL PROTECTION

Control Parameters

<table>
<thead>
<tr>
<th>Titanium dioxide (13463-67-7)</th>
<th>Japan Exposure limits (JSOH)</th>
<th>USA ACGIH ACGIH TWA (mg/m³)</th>
<th>USA ACGIH ACGIH chemical category</th>
</tr>
</thead>
<tbody>
<tr>
<td>Exposure limits (JSOH)</td>
<td>【Occupational exposure limits for dusts】 (Class 2) Respirable dust 1mg/m³ Total dust 4mg/m³</td>
<td>10 mg/m³ Total Dust</td>
<td>Not Classifiable as a Human Carcinogen</td>
</tr>
<tr>
<td>Particulates not otherwise classified (PNOC) (Not applicable)</td>
<td>USA ACGIH ACGIH TWA (mg/m³)</td>
<td>3 mg/m³ Respirable Fraction 10 mg/m³ Total Dust</td>
<td></td>
</tr>
</tbody>
</table>

Biological Limits: No data available

Exposure Controls

Appropriate Engineering Controls: Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure. Ensure adequate ventilation, especially in confined areas. Ensure all national/local regulations are observed. Proper grounding procedures to avoid static electricity should be followed.


Materials For Protective Clothing: Chemically resistant materials and fabrics.

Hand Protection: Wear protective gloves.

Eye Protection: Chemical safety goggles.

Skin And Body Protection: Wear suitable protective clothing.
SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Information On Basic Physical And Chemical Properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical State</td>
<td>Liquid</td>
</tr>
<tr>
<td>Appearance</td>
<td>Grainy off-white paste with mild odor</td>
</tr>
<tr>
<td>Odor</td>
<td>Mild</td>
</tr>
<tr>
<td>Odor Threshold</td>
<td>No data available</td>
</tr>
<tr>
<td>Ph</td>
<td>No data available</td>
</tr>
<tr>
<td>Evaporation Rate</td>
<td>No data available</td>
</tr>
<tr>
<td>Melting Point</td>
<td>No data available</td>
</tr>
<tr>
<td>Freezing Point</td>
<td>No data available</td>
</tr>
<tr>
<td>Boiling Point</td>
<td>No data available</td>
</tr>
<tr>
<td>Flash Point</td>
<td>&gt; 230 °F (110.00 °C)</td>
</tr>
<tr>
<td>Auto-Ignition Temperature</td>
<td>No data available</td>
</tr>
<tr>
<td>Decomposition Temperature</td>
<td>No data available</td>
</tr>
<tr>
<td>Flammability (Solid, Gas)</td>
<td>No data available</td>
</tr>
<tr>
<td>Vapor Pressure</td>
<td>No data available</td>
</tr>
<tr>
<td>Relative Vapor Density At 20 °C</td>
<td>No data available</td>
</tr>
<tr>
<td>Relative Density</td>
<td>No data available</td>
</tr>
<tr>
<td>Specific Gravity / Density</td>
<td>1.3 g/ml</td>
</tr>
<tr>
<td>Solubility</td>
<td>No data available</td>
</tr>
<tr>
<td>Partition Coefficient: N-Octanol/Water</td>
<td>No data available</td>
</tr>
<tr>
<td>Viscosity</td>
<td>No data available</td>
</tr>
<tr>
<td>Explosion Limits</td>
<td>No data available</td>
</tr>
</tbody>
</table>

SECTION 10: STABILITY AND REACTIVITY

Reactivity
This material contains an organic peroxide. Heating may cause hazardous decomposition. Hazardous decomposition products from peroxides are flammable and can be explosive under confinement.

Chemical stability
Stable under recommended handling and storage conditions (see section 7).

Possibility of hazardous reactions
Hazardous polymerization will not occur.

Conditions to avoid
Direct sunlight, extremely high or low temperatures, and incompatible materials. Sparks, heat, open flame and other sources of ignition. Dust accumulation (to minimize explosion hazard). UV light sources.

Incompatible materials
Strong acids, strong bases, strong oxidizers, amines, active metals, ammonia, combustible materials, reducing agents, pure oxygen, oxygen scavengers, peroxides.

Hazardous decomposition products
Toxic gases may be formed, fluoride compounds, silicon oxides, carbon oxides (CO, CO₂), phenolic compounds, acrid smoke, hydrogen.

SECTION 11: HAZARD INFORMATION

Information on toxicological effects
Acute toxicity : Not classified
Polyethylene glycol (25322-68-3)
LD50 oral rat 47000 mg/kg
LD50 dermal rabbit > 20 ml/kg

Cumene hydroperoxide (80-15-9)
LD50 oral rat 382 mg/kg
LD50 dermal rabbit 0.126 ml/kg
LC50 inhalation rat (Dust/Mist - mg/l/4h) 1.4 mg/l/4h
LC50 inhalation rat (ppm) 220 ppm/4h
ATE JP (dermal) 300.000 mg/kg body weight

Titanium dioxide (13463-67-7)
LD50 oral rat > 10000 mg/kg

SKIN CORROSION/IRRITATION:
- Causes skin irritation
- Causes eye irritation
- May cause an allergic skin reaction

GERM CELL MUTAGENICITY:
- Not classified

CARCINOGENICITY:
- Not classified

TITANIUM DIOXIDE (13463-67-7)
IARC group 2B

REPRODUCTIVE TOXICITY:
- Not classified

SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE):
- May cause respiratory irritation

SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE):
- Not classified

ASPIRATION HAZARD:
- Not classified

POTENTIAL ADVERSE HUMAN HEALTH EFFECTS AND SYMPTOMS:
- Based on available data, the classification criteria are not met.

OTHER INFORMATION:
- Not classified

SECTION 12: ECOLOGICAL INFORMATION

TOXICITY
Ecology - general: May cause long lasting harmful effects to aquatic life.

CUMENE HYDROPEROXIDE (80-15-9)

LC50 FISH 1 3.9 mg/l (Exposure time: 96 h - Species: Oncorhynchus mykiss [static])

PERSISTENCE AND DEGRADABILITY

SWAK™

PERSISTENCE AND DEGRADABILITY
- May cause long-term adverse effects in the environment.

BIOACCUMULATIVE POTENTIAL

SWAK™

BIOACCUMULATIVE POTENTIAL
- Not established.

CUMENE HYDROPEROXIDE (80-15-9)

BCF FISH 1 35.5

MOBILITY IN SOIL: No data available

OTHER ADVERSE EFFECTS

Other information: Avoid release to the environment.

SECTION 13: NOTES ON DISPOSAL

WASTE TREATMENT METHODS

Waste treatment methods: Dispose of waste material in accordance with all local, regional, national, provincial, territorial and international regulations.

SECTION 14: TRANSPORT INFORMATION

In accordance with UN TDG
- Not regulated for transport
### SECTION 15: REGULATORY INFORMATION

#### Regulatory Information

<table>
<thead>
<tr>
<th>Substance Description</th>
<th>Regulatory Information</th>
</tr>
</thead>
<tbody>
<tr>
<td>Polytetrafluoroethylene (9002-84-0)</td>
<td>Approval for Item 2, (Import Trade Control Oder, Art.4, Para.1, Item 2) Export Trade Control Order, Attached Table 1 Para.16 (1) Export Approval (Export Trade Control Order, Attached Table 2)</td>
</tr>
<tr>
<td>Law for the Control of Export, Import and Others of Specified Hazardous Wastes and Other Wastes (Basel Convention)</td>
<td>Hazardous Substances Containing in Waste (Act Cat.2 para (1) Item (I) (a), 3 Ministry Notification No.2 of 1993)</td>
</tr>
<tr>
<td>Polyethylene glycol (25322-68-3)</td>
<td>Noxious Liquid Substances - Category Z (Law Art.3(3), Enforcement Order, Art.1-2, Attached Table No.1 Item 3)</td>
</tr>
<tr>
<td>Silica, amorphous, fumed, crystalline-free (112945-52-5)</td>
<td>Notifiable Substances (Law Art.57-2, Enforcement Order Art.18-2 Attached Table No.9, and Law Art.56-1) シリカ (Ordinance number : 312) ()</td>
</tr>
<tr>
<td>Cumene hydroperoxide (80-15-9)</td>
<td>Type III Monitoring Chemical Substance (Article 2, Paragraph (6) of the Act)</td>
</tr>
</tbody>
</table>

---

In Accordance with IATA: Not regulated for transport
In Accordance with IMDG/IMO: Not regulated for transport
Other Information: No data available
<table>
<thead>
<tr>
<th>Policy and Legislation</th>
<th>Regulations and Substances</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Industrial Safety and Health Law</strong></td>
<td>Dangerous Substances - Explosive Substance (Enforcement Order Attached Table 1 Item 1)</td>
</tr>
<tr>
<td><strong>Fire Service Law</strong></td>
<td>Group 5 - Self-reactive materials - Organic peroxides (Law Art.2 Para 7, Attached Table 1, Group 5)</td>
</tr>
<tr>
<td><strong>Foreign Exchange and Foreign Trade Control Act</strong></td>
<td>Export Trade Control Order, Attached Table 1 Para.16 (1)</td>
</tr>
<tr>
<td><strong>Road Act</strong></td>
<td>Restriction for Vehicle Traffic (Enforcement Order Art.19-13, Publication of Japan Highway Public Corp.)</td>
</tr>
<tr>
<td><strong>Japanese Pollutant Release and Transfer Register Law (PRTR Law)</strong></td>
<td>Class 1 Designated Chemical Substances (Act Art.2 para. 2, Enforcement Oder Art.1 Appended Table No.1)</td>
</tr>
</tbody>
</table>

**Regulatory Reference**
- Listed on the AICS (Australian Inventory of Chemical Substances)
- Listed on the Canadian DSL (Domestic Substances List)
- Listed on IECSC (Inventory of Existing Chemical Substances Produced or Imported in China)
- Listed on the EEC inventory EINECS (European Inventory of Existing Commercial Chemical Substances)
- Listed on the Japanese ECNCS (Existing & New Chemical Substances) inventory
- Listed on the Korean ECL (Existing Chemicals List)
- Listed on NZIoC (New Zealand Inventory of Chemicals)
- Listed on PICCS (Philippines Inventory of Chemicals and Chemical Substances)
- Listed on the United States TSCA (Toxic Substances Control Act) inventory
- Listed on the United States TSCA (Toxic Substances Control Act) inventory

**Poly(oxy-1,2-ethanediyl), .alpha,.alpha.'-[(1-methylenehtidene)di-4,1-phenylene]bis.[.omega.-[(2-methyl-1-oxo-2-propenyl)oxy]- (41637-38-1)***

| Fire Service Law | Group 4 - Flammable liquids - 4th Class petroleum (Law Art.2 Para.7, Attached Table 1, Group 4) |

**Regulatory Reference**
- Listed on the AICS (Australian Inventory of Chemical Substances)
- Listed on the Canadian DSL (Domestic Substances List)
- Listed on IECSC (Inventory of Existing Chemical Substances Produced or Imported in China)
- Listed on the Japanese ECNCS (Existing & New Chemical Substances) inventory
- Listed on NZIoC (New Zealand Inventory of Chemicals)
- Listed on the United States TSCA (Toxic Substances Control Act) inventory

**Titanium dioxide (13463-67-7)**

| Industrial Safety and Health Law | Notifiable Substances (Law Art.57-2, Enforcement Oder Art.18-2 Attached Table No.9, and Law Art.56-1) |

| Law Relating to Prevention of Marine Pollution and Maritime Disasters | Noxious Liquid Substances - Category Z (Law Art.3(3), Enforcement Order, Art.1-2, Attached Table No.1 Item 3) |

| Foreign Exchange and Foreign Trade Control Act | Export Trade Control Order, Attached Table 1 Para.16 (1) |

| Pneumoconiosis Law | Dust Work (Act Art.2, Rule for Enforcement Art.2 Attached Table) |

**Regulatory Reference**
- Listed on the AICS (Australian Inventory of Chemical Substances)
- Listed on the Canadian DSL (Domestic Substances List)
- Listed on IECSC (Inventory of Existing Chemical Substances Produced or Imported in China)
- Listed on the EEC inventory EINECS (European Inventory of Existing Commercial Chemical Substances)
- Listed on the Japanese ECNCS (Existing & New Chemical Substances) inventory
- Listed on the Korean ECL (Existing Chemicals List)
- Listed on NZIoC (New Zealand Inventory of Chemicals)
- Listed on PICCS (Philippines Inventory of Chemicals and Chemical Substances)
- Listed on the United States TSCA (Toxic Substances Control Act) inventory
- Listed on INSQ (Mexican national Inventory of Chemical Substances)
- Listed on CICR (Turkish Inventory and Control of Chemicals)
SECTION 16: OTHER INFORMATION

Revision date : 2016/04/05
Data sources : This document has been prepared in accordance with the SDS requirements of the Japanese Hazard Communication Standard JIS Z 7253: 2012 and JIS Z 7252:2009

Japan GHS SDS

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.