

**SAFETY DATA SHEET**

in accordance with 29 CFR 1910.1200 and ANSI standard Z400.1-2010

**API II GPPS****1. Product and company identification****Product identifier**

Trade name: API II PS GPPS  
This safety data sheet pertains to the following products:  
API II 370, API II 373, API II 390, API II 392, API II 395

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

General use: Polymer  
Basic material for chemical industry processing

**Details of the supplier of the safety data sheet**

Company name: API II, Inc.  
Street/POB-No.: 11421 Labrador Lane  
Postal Code, city: Concord, OH 44077  
USA  
WWW: [www.API2.net](http://www.API2.net)  
E-mail: [mikes@api2.net](mailto:mikes@api2.net)  
phone: 508-751-1257  
fax: 413-568-2148

**2. Hazards identification****Emergency overview**

Appearance: Physical state: solid, granulate  
Color: colorless  
Odor: weak

**Regulatory status**

This material is not considered hazardous by the U.S. OSHA Hazard Communication Standard (29 CFR 1910.1200) and SIMDUT in Canada.

**Information pertaining to special dangers for human and environment**

Dust: Can cause skin, eye and respiratory tract irritation. fine  
dust: explosive  
The melted product can cause severe burns.  
see section 11: Toxicological information

**3. Composition / Information on ingredients**

Chemical characterization: polymer  
(C<sub>8</sub>H<sub>8</sub>)<sub>n</sub>  
styrene-homopolymer, GPPS  
CAS-Number: 9003-53-6  
RTECS-Number: WL6475000



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#### 4. First-aid measures

After inhalation:	Provide fresh air. Put victim at rest and keep warm.
In case of skin contact:	The melted product can cause severe burns. Do not remove the product from the skin without medical assistance. After contact with molten product, cool skin area rapidly with cold water. Consult physician.
After eye contact:	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Consult an eye specialist in the event of irritation.
After swallowing:	Do not induce vomiting. Rinse mouth with water. Drink one or two glasses of water. Never give an unconscious person anything through the mouth.

#### Most important symptoms and effects, both acute and delayed

Dust: Skin irritation, eye irritations and redness

#### Information to physician

Treat symptomatically.

#### 5. Firefighting measures

Flash point/flash point range:

> 280 °C

Suitable extinguishing media:

Water fog, foam.

Only in case of small fires: extinguishing powder, carbon dioxide, Sand, earth.

Extinguishing media which must not be used for safety reasons:

High power water jet

#### Special hazards arising from the substance or mixture

In case of fire may be liberated: smoke, Styrene-Monomer, aldehydes and acids (organic), carbon monoxide and carbon dioxide (CO<sub>2</sub>).

Special protective equipment for firefighters:

Wear self - contained breathing apparatus to prevent exposure to poisonous gases that may develop.

Additional information:

Cool endangered containers with water jetspray.

#### 6. Accidental release measures

Personal precautions:	Provide adequate ventilation. Wear personal protection equipment. Do not breathe dust.
Environmental measures:	Do not allow to penetrate into soil, waterbodies or drains.
Methods for cleaning up:	Avoid generation of dust. Remove all sources of ignition. Collect dry and place in appropriate containers for disposal. Subsequent cleaning.
Additional information:	Particular danger of slipping when spread on the ground.



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## 7. Handling and storage

### Handling

Advices on safe handling: Provide adequate ventilation, and local exhaust as needed. Do not breathe dust.  
In the case of the formation of dust: Withdraw by suction.  
Molten material: Avoid contact with the substance.

Precautions against fire and explosion:

Take precautionary measures against static discharge. Keep away from sources of ignition. Use grounding equipment. Use explosion-proof equipment and non-sparking tools/utensils. Avoid open flames.

### Storage

Requirements for storerooms and containers:

Store in a well-ventilated place. Keep container tightly closed. Protect against heat /sun rays.

## 8. Exposure controls / personal protection

### Exposure guidelines

Occupational exposure limit values:

CAS No.	Designation	Type	Limit value
9003-53-6	API II PS GPPS	USA: ACGIH: TWA	10 mg/m <sup>3</sup>
			Dust limit value, indicativ; inhalable fraction
		USA: ACGIH: TWA	3 mg/m <sup>3</sup>
			Dust limit value, indicativ; respirable fraction
100-42-5	Styrene	USA: OSHA: TWA	15 mg/m <sup>3</sup>
			Dust limit value inhalable fraction
		USA: OSHA: TWA	5 mg/m <sup>3</sup>
			Dust limit value respirable fraction
		OSHA: Ceiling	200 ppm
			(Acceptable maximum peak above the acceptable ceiling concentration for an 8-hr shift: 600 ppm 5 mins. in any 3 hrs.)
		USA: ACGIH: STEL	170 mg/m <sup>3</sup> ; 40 ppm
		USA: ACGIH: TWA	85 mg/m <sup>3</sup> ; 20 ppm
		USA: NIOSH: STEL	425 mg/m <sup>3</sup> ; 100 ppm
		USA: NIOSH: TWA	215 mg/m <sup>3</sup> ; 50 ppm
		USA: OSHA: TWA	100 ppm
			(Acceptable maximum peak above the acceptable ceiling concentration for an 8-hr shift: 600 ppm 5 mins. in any 3 hrs.)

Biological limit values:

CAS No.	Designation	Type	Limit value	Parameter	Test material	Sample time
100-42-5	Styrene	USA: ACGIH-BEI	0,2		blood	end of exposure or end of shift
		USA: ACGIH-BEI	400		urine	end of exposure or end of shift



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#### Engineering controls

Provide good ventilation and/or an exhaust system in the work area.  
See also information in chapter 7, section storage.

Eye protection: Tightly sealed goggles according to OSHA Standard - 29 CFR: 1910.133 or ANSI Z87.1-2010.

Body protection: Wear suitable protective clothing.

Protective gloves according to OSHA Standard - 29 CFR: 1910.138.

Glove material: Nitrile rubber - Layer thickness: 0,11 mm.

Breakthrough time: >480 min.

Observe glove manufacturer's instructions concerning penetrability and breakthrough time.

In case of melting: Protective gloves against heat according to OSHA Standard - 29 CFR: 1910.138.

Observe glove manufacturer's instructions concerning penetrability and breakthrough time.

#### Personal protection equipment

Respiratory protection: In case of dust:

Use filter according to OSHA Standard - 29 CFR: 1910.134 or ANSI Z88.2.

#### General protection and hygiene measures

Do not breathe vapors. Keep away from sources of ignition.

Wash hands before breaks and after work.

In case of dust: Particular danger of slipping when spread on the ground.

## 9. Physical and chemical properties

#### Information on basic physical and chemical properties

Appearance:	Physical state: solid, granulate Color: colorless
Odor:	weak
Melting point/melting range:	464 °F
Flash point/flash point range:	> 280 °C
Explosive properties:	Dust explosion risk at fine dust
Density:	at 20 °C approx. 1050 kg/m³ (ISO 1183)
Water solubility:	insoluble
Thermal decomposition:	>572 °F

#### Additional information

Ignition temperature:	> 400 °C
Bulk density:	approx. 600 kg/m³
Additional information:	Molecular weight: 10.000 - 300.000 g/mol



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#### 10. Stability and reactivity

reactivity:	No data available
Chemical stability:	Product is stable under normal storage conditions.
Polymerisation:	In case of dust (Fine dust): danger of dust explosion
Conditions to avoid:	Avoid open flames. Avoid dust formation.
Materials to avoid:	strong oxidizing agents, Gasoline, aldehydes, ketone
Hazardous decomposition products:	In case of fire may be liberated: smoke, Styrene-Monomer, aldehydes and acids (organic), carbon monoxide and carbon dioxide (CO <sub>2</sub> ).
Thermal decomposition:	>572 °F

#### 11. Toxicological information

##### Toxicological tests

Acute toxicity:

LD50 Rat, oral: > 2.000 mg/kg

LD50 Rabbit, dermal: > 2.000 mg/kg

Toxicological effects:	Acute toxicity (oral): Based on available data, the classification criteria are not met. Mild acute toxicity
	Acute toxicity (dermal): Based on available data, the classification criteria are not met. Mild acute toxicity
	Acute toxicity (inhalative): Lack of data. Mild acute toxicity. May cause irritations. Skin corrosion/irritation: Lack of data. May cause irritations.
	Eye damage/irritation: Lack of data. May cause irritations.
	Sensitisation to the respiratory tract: Lack of data.
	Skin sensitisation: Based on available data, the classification criteria are not met. Not sensitising
	Germ cell mutagenicity/Genotoxicity: Lack of data. Carcinogenicity: Lack of data. Carcinogen Status: IARC Rating: 3 Reproductive toxicity: Lack of data.
	Effects on or via lactation: Lack of data.
	Specific target organ toxicity (single exposure): Lack of data. Specific target organ toxicity (repeated exposure): Lack of data. Aspiration hazard: Lack of data.

Other information:

Styrene:	Harmful if inhaled. Causes damage to organs through prolonged or repeated exposure. lung damages May be fatal if swallowed and enters airways. Causes serious eye irritation. Causes skin irritation.
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##### Symptoms

Dust: Skin irritation, eye irritations and redness The melted product can cause severe burns.



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## 12. Ecological information

### Ecotoxicity

Aquatic toxicity: no evidence of aquatic toxicity

Further details: Pellets may accumulate in the digestive systems of birds and aquatic life, causing injury and possible death due to starvation.

### Mobility in soil

Product is not soluble in water.

Substance is heavier than water and sinks. mobility in soil: low

### Persistence and degradability

Further details: Biodegradation: Product is not readily biodegradable.  
Degradation at UV-radiation/sunlight  
Environmental half-life period:  $\geq 100$  days (estimated)

### Additional ecological information

General information: Do not allow to enter into ground-water, surface water or drains

## 13. Disposal considerations

### Product

Recommendation: With due observance of the regulations laid down by the local authorities, this must be brought to a suitable incineration plant/waste disposal site.

### Contaminated packaging

Recommendation: Dispose of waste according to applicable legislation.  
Non-contaminated packages may be recycled.

## 14. Transport information

### USA: Department of Transportation (DOT)

Proper shipping name: Not controlled under DOT

### Sea transport (IMDG)

Proper shipping name: Not restricted  
Marine pollutant: No

### Air transport (IATA)

Proper shipping name: Not restricted

### Further information

No dangerous good in sense of these transport regulations.



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## 15. Regulatory information

### U.S. Federal Regulations

Product: TSCA Inventory: listed; EPA flags XU  
 TSCA HPVC: not listed  
 Carcinogen Status: IARC  
 Rating: Group 3  
 OSHA Carcinogen: not listed NTP  
 Rating: not listed

Styrene: TSCA Inventory: listed  
 TSCA HPVC: not listed  
 Carcinogen Status:  
 IARC Rating: Group 2B OSHA  
 Carcinogen: not listed NTP  
 Rating: listed  
 Clean Air Act:  
 Hazardous Air Pollutants: Code XOY SOCM  
 Chemical: yes  
 Clean Water Act:  
 Hazardous Substances: RQ 1000 lbs. Other  
 Environmental Laws:  
 CERCLA: RQ 1000 lbs.  
 RCRA Groundwater Monitoring: Methods 8020, 8240 / PQL 1, 5  
 SARA Title III Section 313, Toxic Release: Conc. 0.1% / Threshold Standard NIOSH  
 Recommendations:  
 Occupational Health Guideline: 0571

### National regulations - Canada

DSL: Listed

### National regulations - EC member states

EC-number: 500-008-9

### Labeling (67/548/EEC or 1999/45/EC)

Code letter and hazard symbol:

not applicable

R phrase(s): not applicable

S phrase(s): not applicable

### National regulations - Great Britain

Hazchem-Code: -



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## 16. Other information

Hazard rating systems:



NFPA Hazard Rating: Health: 1 (Slight)

Fire: 1 (Slight)

Reactivity: 0 (Minimal) HMIS Version III Rating:

Health: 1 (Slight)

Flammability: 1 (Slight) Physical Hazard: 0 (Minimal)

HMIS Version III Rating:

Health: 1 (Slight)

Flammability: 1 (Slight) Physical Hazard: 0 (Minimal)

Personal Protection: X = Consult your supervisor

HEALTH	1
FLAMMABILITY	1
PHYSICAL HAZARD	0
	X

The information in this data sheet has been established to our best knowledge and was up-to-date at time of revision. It does not represent a guarantee for the properties of the product described in terms of the legal warranty regulations.