



SAFETY DATA SHEET
in accordance with 29 CFR 1910.1200 and ANSI standard Z400.1-2010
API II HIPS

1. Product and company identification

Product identifier

Trade name: API II PS HIPS
This safety data sheet pertains to the following products:
API II 505, API II 505HF, API II 545, API II 550, API II 550HF,
API II 645, API II 650

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
E-mail: mikes@api2.net
Telephone: 508-751-1257
fax: 413-568-2148

2. Hazards identification

Emergency overview

Appearance: Physical state: solid, pellets
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. In case of dust (Fine dust): danger of dust explosion
The melted product can cause severe burns.
see section 11: Toxicological information

3. Composition / Information on ingredients

Chemical characterization: Polymer
(C₈H₈,C₄H₆)_x
styrene-butadiene-copolymer, HIPS

CAS-Number: 9003-55-8
RTECS-Number: WL6478000

Additional information: Preparation does not contain dangerous substances above limits that need to be mentioned in this section according to applicable legislation.



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4. First-aid measures

In case of inhalation:	Provide fresh air. Put victim at rest and keep warm. seek medical attention
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:	Immediately flush eyes with plenty of flowing water for 10 to 15 minutes holding eyelids apart. Consult an eye specialist in the event of irritation. Remove contact lenses, if present and easy to do. Continue rinsing.
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

no data available

Information to physician

Treat symptomatically.

5. Firefighting measures

Flash point/flash point range:	> 536 °F
Auto-ignition temperature:	not self-igniting
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, butadiene, aldehydes and acids (organic), carbon monoxide and carbon dioxide (CO₂).

Special protective equipment for firefighters:	Wear self-contained breathing apparatus.
Additional information:	Cool endangered containers with water jetspray.

6. Accidental release measures

Personal precautions:	Dust may form explosive mixtures with air. Remove all sources of ignition. Provide adequate ventilation. Do not breathe dust. Wear personal protection equipment.
Environmental measures:	Do not allow to penetrate into soil, waterbodies or drains.
Methods for cleaning up:	Avoid generation of dust. Take up mechanically. Can be reused without regeneration. Otherwise, dump or burning.
Additional information:	Take precautionary measures against static discharge. 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.
Avoid dust formation. In the case of the formation of dust: Withdraw by suction. Molten material: Avoid contact with the substance.

Precautions against fire and explosion:
Dust may form explosive mixtures with air. Take precautionary measures against static discharge. Keep away from sources of ignition. Use grounding equipment. Use explosion-proof equipment and non-sparking tools/utensils.

Storage

Requirements for storerooms and containers:
Store in a well-ventilated place. Keep container tightly closed. Protect against heat /sun rays.

Further details: Special danger of slipping by leaking/spilling product.

8. Exposure controls / personal protection

Exposure guidelines

Occupational exposure limit values:

CAS No.	Designation	Type	Limit value
9003-55-8	API II PS HIPS	USA: ACGIH: TWA	10 mg/m ³
		USA: ACGIH: TWA	3 mg/m ³
		USA: OSHA: TWA	15 mg/m ³
		USA: OSHA: TWA	5 mg/m ³
100-42-5	Styrene	OSHA: Ceiling	200 ppm
		USA: ACGIH: STEL	170 mg/m ³ ; 40 ppm
		USA: ACGIH: TWA	85 mg/m ³ ; 20 ppm
		USA: NIOSH: STEL	425 mg/m ³ ; 100 ppm
		USA: NIOSH: TWA	215 mg/m ³ ; 50 ppm
106-99-0	1,3-Butadiene	USA: OSHA: TWA	100 ppm
		USA: ACGIH: TWA	4.4 mg/m ³ ; 2 ppm
		USA: OSHA: STEL	5 ppm
		USA: OSHA: TWA	1 ppm



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Biological limit values:

CAS No.	Designation	Type	Limit value	Parameter	Sampling
100-42-5	Styrene	USA: ACGIH-BEI, blood	0.2 mg/L	Styrene in venous blood	end of exposure or end of shift
		USA: ACGIH-BEI, urine	400 mg/g creatinine	Mandelic acid + Phenylglyoxylic acid	end of exposure or end of shift
106-99-0	1,3-Butadiene	USA: ACGIH-BEI, blood	2.5 pmol/g Hb	Mixture of N-1 and N2-(hydroxybutenyl)valine hemoglobin (Hb) adducts	No restriction
		USA: ACGIH-BEI, urine	2.5 mg/L	1,2 Dihydroxy-4-(N-acetylcysteinyl) -butane	end of exposure or end of shift

Additional information: The product contains very low levels of residual monomers (Styrene and Butadiene) and process chemicals that may be evolved during thermal processing. As the identity and levels of these components evolved will depend upon the processing conditions (temperature etc.) it is the responsibility of the user to determine the adequacy of any protection or safety measures.

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 dust.

Take off immediately all contaminated clothing. When using do not eat, drink or smoke.

Wash hands before breaks and after work. Eye wash facility must be provided.

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



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9. Physical and chemical properties

Information on basic physical and chemical properties

Appearance:	Physical state: solid, pellets Color: colorless
Odor:	weak
Odor threshold:	not available
pH value:	not applicable
Melting point/freezing point:	221 - 275 °F
Initial boiling point and boiling range:	not applicable
Flash point/flash point range:	> 536 °F
Flammability:	Not highly flammable.
Vapor pressure:	not applicable
Density:	at 68 °F: 1030 g/cm ³ (ISO 1183)
Water solubility:	insoluble
Partition coefficient: n-octanol/water:	not relevant
Auto-ignition temperature:	not self-igniting
Thermal decomposition:	572 °F

Additional information

Viscosity, dynamic:	not applicable
Explosive properties:	In case of dust (Fine dust): danger of dust explosion
Oxidizing characteristics:	not oxidising
Ignition temperature:	approx. > 752 °F
Bulk density:	600 g/cm ³
Drop point/drop range:	174,2 - 260,6 °F

10. Stability and reactivity

Reactivity:	no data available
Chemical stability:	Product is stable under normal storage conditions.
Possibility of hazardous reactions	In case of dust (Fine dust): danger of dust explosion
Conditions to avoid:	Avoid dust formation. Dust may form explosive mixtures with air. Keep away from sources of ignition. - No smoking.
Materials to avoid:	Strong oxidizing agents
Hazardous decomposition products:	In case of fire may be liberated: smoke, Styrene-Monomer, butadiene, aldehydes and acids (organic), carbon monoxide and carbon dioxide (CO ₂).
Thermal decomposition:	572 °F



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11. Toxicological information

Toxicological tests

Acute toxicity:

LD50 oral: > 2000 mg/kg

LD50 dermal: > 2000 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): Based on available data, the classification criteria are not met. Mild acute toxicity. May cause irritations.

Skin corrosion/irritation: Lack of data.

Dust: Can cause skin, eye and respiratory tract irritation.

Processing, thermal hazards: Vapors: Can cause skin, eye and respiratory tract irritation.

Eye damage/irritation: Lack of data.

Dust: Can cause skin, eye and respiratory tract irritation.

Processing, thermal hazards: Vapors: Can cause skin, eye and respiratory tract irritation.

Sensitisation to the respiratory tract: Lack of data. The chemical structure does not suggest a specific alert for such an effect.

Skin sensitisation: Based on available data, the classification criteria are not met. Not sensitising

Germ cell mutagenicity/Genotoxicity: Lack of data. The chemical structure does not suggest a specific alert for such an effect.

Carcinogenicity: Based on available data, the classification criteria are not met.

Reproductive toxicity: Lack of data. The chemical structure does not suggest a specific alert for such an effect.

Effects on or via lactation: Lack of data.

Specific target organ toxicity (single exposure): Lack of data.

Dust: Can cause skin, eye and respiratory tract irritation.

Processing, thermal hazards: Vapors: Can cause skin, eye and respiratory tract irritation.

Specific target organ toxicity (repeated exposure): Lack of data. Chronic toxic effects are not expected. The product has not been tested. The statement is derived from products of similar structure or composition.

Aspiration hazard: Lack of data.

Other information:

When handled appropriately, even after long years of experience with this product, no adverse health effects are known.

Symptoms

Dust: Skin irritation, eye irritations and redness

The melted product can cause severe burns.

Processing, thermal hazards:

Irritating to eyes, respiratory system and skin.



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12. Ecological information

Ecotoxicity

Aquatic toxicity: no evidence of aquatic toxicity

Effects in sewage plants: Not toxic to sewage organisms
In sewage treatment plants it may be separated mechanically.

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: ≥ 100 days (estimated)

Additional ecological information

General information: Do not allow to penetrate into soil, waterbodies 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 SOCMI 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
1,3-Butadiene:	TSCA Inventory: listed TSCA HPVC: not listed Carcinogen Status: IARC Rating: Group 2A OSHA Carcinogen: listed NTP Rating: listed Clean Air Act: Accidental Release Prevention: Threshold 10000 lbs. / Basis for listing = f Hazardous Air Pollutants: Code XOY SOCMI Chemical: yes Other Environmental Laws: CERCLA: RQ 10 lbs. SARA Title III Section 313, Toxic Release: Conc. 0.1% / Threshold Standard NIOSH Recommendations: Occupational Health Guideline: 0067

U.S. State Regulations

California Proposition 65:
 THIS PRODUCT(S) CONTAINS A CHEMICAL(S) KNOWN TO THE STATE OF CALIFORNIA
 TO CAUSE CANCER AND BIRTH DEFECTS OR OTHER REPRODUCTIVE HARM.

National regulations – Canada DSL: listed

National regulations - EC member states

EC-number: -

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)

Personal Protection: X = Consult your supervisor

HEALTH	1
FLAMMABILITY	1
PHYSICAL HAZARD	0
	X

Department issuing data sheet

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.