

Asahi Kasei

Product Name: Delpet™
MSDS Regulation Number: AKDP-02

Created: 1994/08/23
Revised: 2003/01/15 (20th version)

Section 1 – Product and Company Identification

Product Identification: Delpet™ SR (Shock Resistant Grade)

8500, 8400, 8350, 8200, 8175, 8100, 6500, 6350, 6200, 7175, B235, B235, B215, B100, etc.

MSDS Reference Number: AKDF-02

Manufacturer's Name: ASAHI KASEI CORPORATION

Manufacturer's Address: Hibiya-Mitsui Building, 1-2 Yurakucho 1-chome, Chiyoda-ku, Tokyo, Japan, 100-8440

Department: Chemicals and Plastics Company, Methyl Methacrylate (MMA) Division, MMA Monomer/ Plastics Sales Department

Chemicals and Plastics Company, Methyl Methacrylate (MMA) Division, Optical Sales Department

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Emergency Contact: Chemicals and Plastics Company, Methyl Methacrylate (MMA) Division, Acrylic Plastics Development/ Technical Department

Emergency Contact Number: +81-4-4271-4450

Section 2 - Composition, Information on Ingredients

Homogenous/ Mixture Classification: Mixture

Ingredient Name: Mixture of Methyl Methacrylate/ Butyl Acrylate/ Steryl copolymer and Methyl Methacrylate/ Methyl Acrylate copolymer

Other Name: Shock Resistant Methacryl Plastic

Component Content Number	1	2	3	4	5
Contents	Methyl Methacrylate/ Butyl Acrylate/ Steryl copolymer	Methyle Methacrylate/ Methyl Acrylate copolymer	Acrylic Monomer	Styrene Monomer	Other contents *2
Nomenclature	$(C_8H_8/C_7H_{12}O_2/C_5H_8O_2)_x$	$(C_5H_8O_2/C_4H_6O_2)_x$	*1	C_8H_8	
% By Weight	> 94.5		< .5		> 5.0
Official Reference # Chemical Substance Control Law	(6)-186	(6)-553	*1	(3)-4	All content is chemical, but the number is withheld as a trade secret
CAS #	27136-15-8	9011-87-4	*1	100-42-5	Withheld – trade secret

*1 Acrylic Monomer 1) Methyl Methacrylate $C_5H_8O_2$ Chemical Substance Control Law (2)-1035 CAS# 30-62-6
2) Methyl Acrylate $C_4H_6O_2$ Chemical Substance Control Law (2)-987 CAS# 96-33-3
3) Butyl Acrylate $C_7H_{12}O_2$ Chemical Substance Control Law (2)-989 CAS# 141-32-2

*2 The other contents contain the necessary antioxidants, stabilizers, lubricants, pigments, etc.

Hazardous Contents: None

Section 3 - Hazards Identification

Most Important Hazards

Health Hazards: Carbon monoxide and carbon dioxide are created during incomplete combustion. Monomers created via complete analysis are irritants, and sometimes lead to headaches and nausea.

Environment Influence: We have no knowledge of analysis.

Physical and Chemical Danger: Flammable object. Under ordinary circumstances, danger of fire is extremely low. When plastics are in a powder state, there is a possibility of dust explosions.

Classification Name (Japanese Classification Standards): The classification doesn't correspond to classification standards, but is designated as inflammable (plastics) according to fire department regulations.

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Section 4 - First Aid Measures

Inhalation: If fumes from melting material are inhaled, remove to fresh air and await recovery. If recovery does not occur, seek medical attention.

Skin Contact: Wash skin with soap and clean water. If melted plastics contact skin, cool area with clean water, and seek immediate medical assistance.

Eye Contact: Because rubbing eyes with dust in them can cause damage to the eyeball, eye contact should be followed by irrigation of the eyes for at least 15 minutes, ensuring adequate cleansing. If discomfort continues, seek medical attention from an optometrist.

Ingestion: Although not a dangerous material, if possible, vomit if ingested. If ingested in large amounts, and discomfort continues, seek medical attention.

Precautions for Individual Performing Emergency Measures: Use heat resistant gloves when disposing of melted plastics.

Section 5 - Fire Fighting Measures

Extinguishing Media: Water, water spray, powder extinguisher or foam extinguisher

Specific Hazards When Ignited: When ignited, care is necessary to avoid the black smoke and hazardous fumes, containing carbon monoxide, monomers, and such volatile elements, given off by complete decomposition and incomplete combustion of materials.

Specific Fire Fighting Method: Combat fire from an upwind position. If possible to do safely, suppress fire at the source. During the initial period of a fire, use a powder extinguisher. If fire becomes large-scale, use a foam extinguisher, and prevent air circulation.

Precautions for Individual Performing Fire Control Measures: Wear protective equipment such as self-contained breathing apparatus, protective clothing and protective gloves.

Section 6 - Accidental Release Measures

Cautions for Workers: Pellets dropped on the road or floor are prone to leak, and must be managed quickly.

Environmental Cautions: Spilled materials are a source of industrial water pollution if discharged into rivers, lakes or seas, so must be promptly recovered and managed.

Methods of Disposal: Small amounts can be collected with a vacuum or broom. Discharge can be recovered by scooping it up, or sweeping it into the trash.

Secondary Fire Prevention: Because of its flammable nature, the usage of open flame, sparks or other sources of ignition is prohibited.

Section 7 - Handling and Storage

Handling: There is no danger of ignition at normal temperatures, but careless use of fire at the workplace should be avoided, and care should be taken to maintain a tidy workspace. Because the presence of plastic dusts creates the possibility of dust explosions, it is necessary to enact a policy to avoid the buildup of plastic dusts. Dust explosion prevention policies should be put into place. Policies that mandate equipment such as venting fans, bag filters and hoppers to have a ground to discharge static electricity, and, if necessary, operating in an inert atmosphere (e.g. nitrogen inerting). Also, ensure a prevention policy is in place outlining venting procedures to keep the venting speed low in order to limit oxygen concentration levels.

Storage:

Important Storage Requirements: When storing, avoid direct sunlight, sources of ignition, sudden temperature changes, leaky places, and places with high humidity.

Safety Wrap: The material is absorbent, so an aluminum foil coated polyethylene bag as well as a desiccant should be used.

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Section 8 - Engineering Controls & Personal Protective Equipment

Facility Management: If dust is created, or if fumes or vapors are released due to melting material, facility should be equipped with explosion-proof local ventilation.

Concentration Control: Not established.

Permissible Concentration: When there is dust, the following standards should be observed.

Japan Society for Occupational Health - 2002

Third-class dust concentration levels	Inhalable Particulate	8mg/m ³
	Respirable Particulate	2mg/ m ³

ACGIH (American Conference of Governmental Industrial Hygienists) - 2001

Permissible concentration of general dust levels (TWA)

Inhalable Particulate	10mg/m ³
Respirable Particulate	3mg/m ³

Protective Equipment:

Respiratory Protection: Dust respirator should be worn to prevent inspiration of dust particles.

Hand Protection: When handling molten polymeric resins, heat-resistant gloves should be worn to prevent thermal burns.

Eye Protection: Wear safety glasses to prevent dust from entering eyes.

Clothing: When handling molten polymeric resins, heat-resistant, long-sleeved clothing should be worn to prevent thermal burns.

Section 9 - Physical & Chemical Properties

Outward Appearance:

Physical State: Solid

Shape: Pellets

Color: Transparent or Colored.

Odor: Almost none

pH: No data available

Temperature at which the physical state changes

Melting Point: Although not clearly melted, at 100°C, it gradually becomes malleable.

Flash Point: No available data.

Point of Ignition: above 400°C.

Explosion Limits

Lower Limit: No available data.

Upper Limit: No available data.

Density: 1.14-1.17 g/cm³ (depends on amount of rubber acrylate content)

Solubility

Water: Non-soluble.

Other Solvents: Soluble in aromatics and esterase.

Section 10 - Reactivity

Stability: Stable during standard handling and storage.

Reactivity: Although not self-reactive under normal temperatures, at extreme temperatures (250-400°C) plastics decompose, giving off decomposition gas, and these molten plastics should be promptly cooled with water.

Conditions to avoid: Avoid storage at high temperatures and in humid environments.

Incompatible: Open flames.

Hazards Decomposition: High temperature decomposition produces carbon monoxide, carbon dioxide, acrylic monomer, styrene monomer.

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Section 11 - Toxicological Information

Acute Toxicity: None known.

Local Effects: Fumes released in dry or molten state cause irritation to eyes and skin.

Sensitivity: None known.

Genotoxicity: None known.

Other: Stable at standard temperatures and pressure.
Somatically inert, normally no effects on the body.

Section 12 - Ecological Information

Persistence/ Decomposition: None known.

Accumulation in Body: None known.

Ecological Toxicity:

Fish: None known.

Other Animals: None known.

Section 13 - Disposal

Dispose in accordance with regulations by incineration or bury in a landfill disposal site. When disposing via incineration, take care to avoid the danger of dust explosions by keeping the dust particles big, and follow the air pollution laws used at incineration facilities. When disposing into landfill sites, dispose in accordance with the laws concerning the disposal and cleaning of waste. In order to prevent marine pollution, don't dispose or discharge into the oceans or other bodies of water.

Section 14 - Transportation Information

International Regulations:

IMDG (International Marine Dangerous Goods) code: N/A

JCAO-TI (Japan Citizen's Airplane Organization - Technical Initiative), IATA-DGR (International Airway Transportation Association - Dangerous Goods Regulation): N/A

UN Classification: N/A

UN Number: N/A

Japan Regulations: As the transportation is performed in accordance with Japan's regulations, the contents and loading follows the specific regulations.

Fire Department Regulations: Designated flammable material (compound plastics)

Specific Transportation Safety Measures and Conditions: Ensure that there is no damage to the bag before transporting material. Avoid overturning, dropping or damaging the material when stacking. Follow proper load restrictions when loading vehicle.

Section 15 – Regulatory Information

Fire Department Regulations: Designated flammable material - compound plastics (over 3 000 kg).

Chemical Products Control Promotion Regulation: Does not contain more than 1% wt of primary designated chemicals and secondary designated chemicals, nor over .1% wt of primary designated chemicals.

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Section 16 - Other Information

Prohibited Usage: This material should never be used as medical equipment with parts embedded in the body that directly touch the tissues or body fluids.

Usage Cautions: When using this product for usage with food products or water, for cosmetics, toys, medical treatment or sports, always contact our company contact for consultation about your specific usage.

This material safety data sheet is based on the latest available materials and data, and has been revised to reflect new information. The warnings and cautions within this MSDS assume normal usage. Special, unique usage of this product should be conducted according to appropriate safety measures. This MSDS contains adequate warnings by our company, but we do not purport to guarantee all contents.

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