SAFETY DATA SHEET

1. Identification

Product identifier	**LEONA™ 9400S**
Other means of identification	None.
Recommended use	Plastic raw material for home electronics, electronic materials, automotive materials, industrial materials, etc.
Recommended restrictions	Please do not use our product for the following use. Medical containers, packaging, tools and parts that come into contact with body, mucous membranes, body fluids, blood, medicinal solution, etc. Containers, packaging tools and parts that come into contact with food, drinking water, etc. Toys that touch mouth. If you will export this product to other countries, check with us beforehand.

Manufacturer/Importer/Supplier/Distributor information

Company	ASAHI KASEI CORPORATION Hibiya Mitsui Tower, 1-1-2, Yurakucho, Chiyoda-ku, Tokyo 100-0006 , Japan https://www.asahi-kasei-plastics.com/products/leona/ Industrial Materials Sales & Marketing Dept. +81-3-6699-3388 +81-3-6699-3472 (FAX) Automotive Materials Sales&Marketing Dept. (Nagoya) +81-52-212-2133 +81-52-212-2229(FAX) (Tokyo) +81-3-6699-3389 +81-3-6699-3471 (FAX)
Technical Service	Performance Plastics Application Development Promotion Dept. +81-44-271-2650
Emergency Call	+1-866-519-4752(Verisk 3E) +1-760-476-3961(Verisk 3E)
Access Code	335643
Contact	ASAHI KASEI PLASTICS NORTH AMERICA, INC. +1-517-223-2000 +1-517-223-2002(FAX)

2. Hazard(s) identification

Physical hazards	Not classified.
Health hazards	Not classified.
Environmental hazards	Not classified.
OSHA defined hazards	Not classified.

Label elements

Hazard symbol	None.
Signal word	None.
Hazard statement	Not available.
Precautionary statement	
Prevention	Wear suitable protective clothing. Use only with adequate ventilation.
Response	Get medical advice/attention if you feel unwell.
Storage	Keep container tightly closed. Store away from incompatible materials.
Disposal	Dispose of waste and residues in accordance with local authority requirements.

Hazard(s) not otherwise classified (HNOC)	This product may emit gases in molten state.
Supplemental information	None.

3. Composition/information on ingredients

Mixtures

Chemical name	Common name and synonyms	CAS number	%
Polyamide 66/6		24993-04-2	90-95
Colorant		-	< 5
Titanium dioxide		13463-67-7	
Carbon black		1333-86-4	
Iron oxide		1309-37-1	
Inorganic mangan complex		Confidential	
Complex inorganic color pigments		Confidential	

4. First-aid measures

Inhalation	Move to fresh air. Call a physician if symptoms develop or persist.
Skin contact	If burned by contact with hot material, cool molten material adhering to skin as quickly as possible with water, and see a physician for removal of adhering material and treatment of burn. Get medical attention if irritation develops and persists.
Eye contact	Rinse with water. Get medical attention if irritation develops and persists.
Ingestion	If swallowed, rinse mouth with water (only if the person is conscious). Get medical advice/attention.
Most important symptoms/effects, acute and delayed	Thermal burn hazard - contact with hot material may cause thermal burns.

5. Fire-fighting measures

Suitable extinguishing media	Water fog. Foam. Dry chemical powder. Carbon dioxide (CO2).
Unsuitable extinguishing media	Not available.
Specific hazards arising from the chemical	During fire, gases hazardous to health may be formed. (CO, HCN, NH3, CO2)
Special protective equipment and precautions for firefighters	Self-contained breathing apparatus and full protective clothing must be worn in case of fire.
Specific methods	Use standard firefighting procedures and consider the hazards of other involved materials.
General fire hazards	Will burn if involved in a fire.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures	Keep unnecessary personnel away. For personal protection, see section 8 of the SDS.
Methods and materials for containment and cleaning up	The product is immiscible with water and will sediment in water systems. Sweep up or vacuum up spillage and collect in suitable container for disposal.
Environmental precautions	Do not discharge into drains, water courses or onto the ground. Avoid release to the environment. Collect and dispose of spillage as indicated in section 13 of the SDS.

7. Handling and storage

Precautions for safe handling	Do not handle until all safety precautions have been read and understood. See Section 8 of the SDS for Personal Protective Equipment. When handling molten resin, Use only in area provided with appropriate exhaust ventilation. Check molding conditions: https://www.asahi-kasei-plastics.com/en/products/forming/leona/ May be ignited by open flame. Avoid heat, sparks, open flames and other ignition sources. Take precautionary measures against static discharges. Practice good housekeeping. In case of spills, beware of slippery floors and surfaces. Avoid contact with hot material. Cool skin rapidly with cold water after contact with molten polymer. Avoid breathing fumes from molten polymer.
Conditions for safe storage, including any incompatibilities	Store in a cool, dry place out of direct sunlight. Do not handle or store near an open flame, heat or other sources of ignition. Take precautionary measures against static discharges.

8. Exposure controls/personal protection

Occupational exposure limits

US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)

Components	Type	Value	Form
Carbon black (CAS 1333-86-4)	PEL	3.5 mg/m3	
Complex inorganic color pigments	PEL	1 mg/m3	
Inorganic mangan complex	Ceiling	5 mg/m3	
Iron oxide (CAS 1309-37-1)	PEL	10 mg/m3	Fume.
Titanium dioxide (CAS 13463-67-7)	PEL	15 mg/m3	Total dust.

US. OSHA Table Z-3 (29 CFR 1910.1000)

Components	Type	Value	Form
Iron oxide (CAS 1309-37-1)	TWA	5 mg/m3	Respirable fraction.
		15 mg/m3	Total dust.
		50 mppcf	Total dust.
		15 mppcf	Respirable fraction.
Titanium dioxide (CAS 13463-67-7)	TWA	5 mg/m3	Respirable fraction.
		15 mg/m3	Total dust.
		50 mppcf	Total dust.
		15 mppcf	Respirable fraction.

ACGIH

Material	Type	Value	Form
LEONA™ 9400S	TWA	3 mg/m3	Respirable fraction.
		10 mg/m3	Inhalable dust.

US. ACGIH Threshold Limit Values

Components	Type	Value	Form
Carbon black (CAS 1333-86-4)	TWA	3 mg/m3	Inhalable fraction.
Inorganic mangan complex	TWA	0.1 mg/m3	Inhalable fraction.
		0.02 mg/m3	Respirable fraction.
Iron oxide (CAS 1309-37-1)	TWA	5 mg/m3	Respirable fraction.
Titanium dioxide (CAS 13463-67-7)	TWA	10 mg/m3	

US. NIOSH: Pocket Guide to Chemical Hazards

Components	Type	Value	Form
Carbon black (CAS 1333-86-4)	TWA	0.1 mg/m3	
Complex inorganic color pigments	TWA	0.015 mg/m3	
Inorganic mangan complex	STEL	3 mg/m3	Fume.
	TWA	1 mg/m3	Fume.
Iron oxide (CAS 1309-37-1)	TWA	5 mg/m3	Dust and fume.

Biological limit values

ACGIH Biological Exposure Indices

Components	Value	Determinant	Specimen	Sampling Time
Complex inorganic color pigments	15 µg/l	Cobalt	Urine	*

* - For sampling details, please see the source document.

Appropriate engineering controls Provide adequate general and local exhaust ventilation.

Individual protection measures, such as personal protective equipment

Eye/face protection	Wear eye/face protection.
Skin protection	
Hand protection	When handling hot material, use heat resistant gloves.
Other	Wear suitable protective clothing.
Respiratory protection	In case of insufficient ventilation, wear suitable respiratory equipment.
Thermal hazards	Normal work clothing (long sleeved shirts and long pants) is recommended.
General hygiene considerations	Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants. Do not eat, drink or smoke when using the product.

9. Physical and chemical properties

Appearance	
Physical state	Solid.
Form	Pellets.
Color	Various.
Odor	Slight.
Odor threshold	Not available.
pH	Not applicable.
Melting point/freezing point	419 - 509 °F (215 - 265 °C)
Initial boiling point and boiling range	Not applicable.
Flash point	> 752.0 °F (> 400.0 °C)
Evaporation rate	Not available.
Flammability (solid, gas)	Not available.
Upper/lower flammability or explosive limits	
Explosive limit - lower (%)	Not applicable.
Explosive limit - upper (%)	Not applicable.
Vapor pressure	Not available.
Vapor density	Not available.
Relative density	1.1 - 1.2
Solubility(ies)	
Solubility (water)	Insoluble
Partition coefficient (n-octanol/water)	Not applicable.
Auto-ignition temperature	> 752 °F (> 400 °C)
Decomposition temperature	> 572 °F (> 300 °C)
Viscosity	Not available.
Other information	
Dynamic viscosity	Not applicable.

10. Stability and reactivity

Reactivity	The product is stable and non-reactive under normal conditions of use, storage and transport.
Chemical stability	Material is stable under normal conditions.
Possibility of hazardous reactions	No dangerous reaction known under conditions of normal use.
Conditions to avoid	Avoid temperatures exceeding the decomposition temperature. Contact with incompatible materials.
Incompatible materials	Strong acids. Oxidizing agents.
Hazardous decomposition products	At thermal decomposition temperatures, carbon monoxide and carbon dioxide. Toxic gas. (HCN, NH3)

11. Toxicological information

Information on likely routes of exposure

Inhalation	Prolonged inhalation may be harmful.

Skin contact Thermal burn hazard - contact with hot material may cause thermal burns.

Eye contact May be irritating to eyes.

Ingestion May cause discomfort if swallowed. May be harmful if swallowed.

Symptoms related to the physical, chemical and toxicological characteristics Molten material will produce thermal burns. Irritation of eyes.

Information on toxicological effects

Acute toxicity Due to partial or complete lack of data the classification is not possible.

Components	Species	Test Results
Carbon black (CAS 1333-86-4)		
Acute		
Oral		
LD50	Rat	> 8000 mg/kg
Complex inorganic color pigments		
Acute		
Oral		
LD50	Rat	> 10000 mg/kg
Inorganic mangan complex		
Acute		
Oral		
LD50	Rat	> 10000 mg/kg
Iron oxide (CAS 1309-37-1)		
Acute		
Oral		
LD50	Rat	> 5000 mg/kg
Titanium dioxide (CAS 13463-67-7)		
Acute		
Inhalation		
LC50	Rat	3.43 mg/l, 4 Hours
Oral		
LD50	Rat	> 5000 mg/kg

Skin corrosion/irritation Not available.

Serious eye damage/eye irritation Not available.

Respiratory or skin sensitization

ACGIH sensitization

Cobalt and inorganic compounds, as Co (CAS Confidential)	Dermal sensitization
	Respiratory sensitization

Respiratory sensitization Not available.

Skin sensitization Not available.

Germ cell mutagenicity Not available.

Carcinogenicity

IARC Monographs. Overall Evaluation of Carcinogenicity

Carbon black (CAS 1333-86-4)	2B Possibly carcinogenic to humans.
Iron oxide (CAS 1309-37-1)	3 Not classifiable as to carcinogenicity to humans.
Titanium dioxide (CAS 13463-67-7)	2B Possibly carcinogenic to humans.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1053)

Not listed.

US. National Toxicology Program (NTP) Report on Carcinogens

Carbon black (CAS 1333-86-4)	Known To Be Human Carcinogen.
Complex inorganic color pigments (CAS Confidential)	Known To Be Human Carcinogen. Reasonably Anticipated to be a Human Carcinogen.

Reproductive toxicity Not available.

Specific target organ toxicity - single exposure Not available.

Specific target organ toxicity - repeated exposure Not available.

Aspiration hazard Not available.

12. Ecological information

Ecotoxicity

Components		Species	Test Results
Titanium dioxide (CAS 13463-67-7)			
Aquatic			
Acute			
Crustacea	EC50	Water flea (Daphnia magna)	> 1000 mg/l, 48 hours
Fish	LC50	Mummichog (Fundulus heteroclitus)	> 1000 mg/l, 96 hours

Persistence and degradability Not available.

Bioaccumulative potential Not available.

Mobility in soil Not available.

Other adverse effects Not available.

13. Disposal considerations

Disposal instructions Dispose of contents/container in accordance with local/regional/national/international regulations. Contract with a disposal operator licensed by the Law on Disposal and Cleaning.

Waste from residues / unused products Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner.

Contaminated packaging Since emptied containers may retain product residue, follow label warnings even after container is emptied.

14. Transport information

DOT

Not regulated as dangerous goods.

IATA

Not regulated as dangerous goods.

IMDG

Not regulated as dangerous goods.

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code Not available.

15. Regulatory information

US federal regulations

Toxic Substances Control Act (TSCA)

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

Not regulated.

CERCLA Hazardous Substance List (40 CFR 302.4)

Inorganic mangan complex (CAS Confidential) Listed.

SARA 304 Emergency release notification

Not regulated.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1053)

Not listed.

Superfund Amendments and Reauthorization Act of 1986 (SARA)

SARA 302 Extremely hazardous substance

Not listed.

SARA 311/312 Hazardous chemical No

SARA 313 (TRI reporting)

Chemical name	CAS number	% by wt.
Inorganic mangan complex	Confidential	

Other federal regulations

Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List

Inorganic mangan complex (CAS Confidential)

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)

Not regulated.

Safe Drinking Water Act (SDWA) Not regulated.

US state regulations

US. California. Candidate Chemicals List. Safer Consumer Products Regulations (Cal. Code Regs, tit. 22, 69502.3, subd. (a))

Carbon black (CAS 1333-86-4)
Complex inorganic color pigments (CAS Confidential)
Titanium dioxide (CAS 13463-67-7)

California Proposition 65

California Proposition 65 - CRT: Listed date/Carcinogenic substance

Carbon black (CAS 1333-86-4)	Listed: February 21, 2003
Complex inorganic color pigments (CAS Confidential)	Listed: May 7, 2004
Titanium dioxide (CAS 13463-67-7)	Listed: September 2, 2011

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

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Version #	01
Disclaimer	Not available.