



PA 650 Black

Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878
Issue date: 05/12/2025 Revision date: 05/12/2025 Version: 1.0

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Product form : Mixture
Product name : PA 650 Black

1.2. Relevant identified uses of the substance or mixture and uses advised against

Relevant identified uses

Main use category : Industrial use
Use of the substance/mixture : Specialty nylon composite for sintering.

1.3. Details of the supplier of the safety data sheet

Manufacturer

Advanced Laser Materials, LLC.
3115 Lucius McCelvey Dr
Temple, Texas
USA
T (254) 773-3080 M-F, 8:00 a.m. – 5:00 p.m.
Life_Cycle_NA@eos-na.com

Distributor

EOS GmbH – Electro Optical Systems
Robert-Stirling-Ring 1
Krailling, München
Germany 82152
T +49 (0) 89 / 8 93 36 – 0
MSDSInfo@eos.info

1.4. Emergency telephone number

Emergency number : (254) 773-3080, 8:00 a.m. – 5:00 p.m.
Monday - Friday
Central time

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification according to Regulation (EC) No. 1272/2008 [CLP]

Not classified.

Adverse physicochemical, human health and environmental effects

No additional information available

2.2. Label elements

Labelling according to Regulation (EC) No. 1272/2008 [CLP]

No labelling applicable

2.3. Other hazards

Other hazards which do not result in classification : May form combustible dust concentrations in air.

This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII

This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII

The mixture does not contain substance(s) included in the list established in accordance with Article 59(1) of REACH for having endocrine disrupting properties, or substance(s) are not identified as having endocrine disrupting properties in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at a concentration equal to or greater than 0,1 %

SECTION 3: Composition/information on ingredients

3.1. Substances

Not applicable

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3.2. Mixtures

Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
Carbon black substance with national workplace exposure limit(s) (IE)	CAS-No.: 1333-86-4 EC-No.: 215-609-9;435-640-3 REACH-no: 01-2119384822-32	0.5 – 1	Not classified.

SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures after inhalation	: If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical advice/attention if you feel unwell.
First-aid measures after skin contact	: If skin irritation occurs: Wash skin with plenty of water. Obtain medical attention if irritation persists.
First-aid measures after eye contact	: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.
First-aid measures after ingestion	: Do not induce vomiting without medical advice. Never give anything by mouth to an unconscious person. Get medical advice/attention if you feel unwell.

4.2. Most important symptoms and effects, both acute and delayed

Symptoms/effects after inhalation	: Dust may cause respiratory tract irritation.
Symptoms/effects after skin contact	: Dust may cause skin irritation. Repeated exposure may cause skin dryness or cracking.
Symptoms/effects after eye contact	: Dust may cause eye irritation. Symptoms may include discomfort or pain, excess blinking and tear production, with possible redness and swelling.
Symptoms/effects after ingestion	: May be harmful if swallowed. May cause gastrointestinal irritation, nausea, vomiting and diarrhea.

4.3. Indication of any immediate medical attention and special treatment needed

Symptoms may be delayed. In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media	: Water spray. Dry chemical. Foam. Carbon dioxide.
Unsuitable extinguishing media	: Do not use water jet.

5.2. Special hazards arising from the substance or mixture

Fire hazard	: Combustible dust. Products of combustion may include, and are not limited to: oxides of carbon. Oxides of nitrogen.
Explosion hazard	: Airborne dust in sufficient concentrations when confined and exposed to a sufficient ignition source can explode.

5.3. Advice for firefighters

Protection during firefighting	: Keep upwind of fire. Wear full fire fighting turn-out gear (full Bunker gear) and respiratory protection (SCBA).
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SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General measures : Use personal protection recommended in Section 8. Isolate the hazard area and deny entry to unnecessary and unprotected personnel. Eliminate sources of ignition. Dust deposits should not be allowed to accumulate on surfaces, as these may form an explosive mixture if they are released into the atmosphere in sufficient concentration. Avoid dispersal of dust in the air (ie, clearing dust surfaces with compressed air). Use only non-sparking tools.

6.2. Environmental precautions

Prevent entry to sewers and public waters.

6.3. Methods and material for containment and cleaning up

For containment : Contain spill, then place in a suitable container. Minimise dust generation. Do not flush to sewer or allow to enter waterways. Use appropriate Personal Protective Equipment (PPE).
Methods for cleaning up : Vacuum or sweep material and place in a disposal container. Avoid dust formation. Provide ventilation.

6.4. Reference to other sections

For further information refer to section 8: "Exposure controls/personal protection".

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling : Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Handle and open container with care. Ensure adequate ventilation. Good housekeeping is important to prevent accumulation of dust. Use only non-sparking tools. Avoid contact with skin and eyes. Avoid breathing dust/fume/gas/mist/vapours/spray. Do not swallow. When using do not eat, drink or smoke. Avoid dust formation. The use of compressed air for cleaning clothing, equipment, etc, is not recommended. Handling this product may result in electrostatic accumulation. Use proper grounding procedures.
Hygiene measures : Wash contaminated clothing before reuse. Always wash hands after handling the product.

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions : Keep away from sources of ignition. Keep out of the reach of children. Keep container tightly closed. Store in dust-tight, dry, labelled containers. Avoid any dust buildup by frequent cleaning and suitable construction of the storage area. Store in a dry, cool and well-ventilated place.

7.3. Specific end use(s)

Specialty nylon composite for sintering.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

National occupational exposure and biological limit values

Carbon black (1333-86-4)	
Ireland - Occupational Exposure Limits	
OEL TWA	3 mg/m ³ (inhalable fraction)
OEL STEL	15 mg/m ³ (calculated-inhalable fraction)

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Recommended monitoring procedures

Monitoring methods	
Monitoring methods	Consult the relevant monitoring standards for the region.

DNEL and PNEC

Additional information : Not applicable

8.2. Exposure controls

Appropriate engineering controls

Appropriate engineering controls:

Ensure good ventilation of the work station. It is recommended that all dust control equipment such as local exhaust ventilation and material transport systems involved in handling of this product contain explosion relief vents or an explosion suppression system or an oxygen-deficient environment. Ensure that dust-handling systems (such as exhaust ducts, dust collectors, vessels, and processing equipment) are designed in a manner to prevent the escape of dust into the work area (i.e, there is not leakage from the equipment). Use only appropriately classified electrical equipment and powered industrial trucks.

Personal protection equipment

Personal protective equipment:

Avoid all unnecessary exposure.

Eye and face protection

Eye protection:

Safety glasses or goggles are recommended when using product.

Skin protection

Skin and body protection:

Wear suitable protective clothing

Hand protection:

Wear suitable gloves. Consult glove manufacturer's product information on material suitability and material thickness.

Respiratory protection

Respiratory protection:

In case of insufficient ventilation, wear suitable respiratory equipment. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.

Thermal hazards

Thermal hazard protection:

Use personal protective equipment as required.

Environmental exposure controls

Environmental exposure controls:

Maintain levels below Community environmental protection thresholds. Avoid release to the environment.

Other information:

Handle in accordance with good industrial hygiene and safety procedures. Do not eat, drink or smoke when using this product.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	: Solid
Colour	: dark grey.
Appearance	: Powder.
Odour	: Odourless.
Odour threshold	: Not available
Melting point	: > 185 °C EN ISO 11357-1
Freezing point	: Not available
Boiling point	: Refer to component values below
Flammability	: May form combustible dust concentrations in air
Lower explosion limit	: Not applicable
Upper explosion limit	: Not applicable

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Flash point	: Refer to component values below
Auto-ignition temperature	: ≤ 350 DIN 51794
Decomposition temperature	: ≤ 300
pH	: Negligible solubility
pH solution	: Not available
Viscosity, kinematic	: Not applicable
Solubility	: Not soluble in water.
Partition coefficient n-octanol/water (Log Kow)	: Not available
Vapour pressure	: Not applicable
Vapour pressure at 50°C	: Not applicable
Density	: 1 – 1.1 g/cm ³ @20 C
Relative density	: Not applicable
Relative vapour density at 20°C	: Not applicable
Particle size	: Not available

Carbon black (1333-86-4)

Boiling point	4200 °C
Flash point	> 500 °C
Auto-ignition temperature	900 °C

9.2. Other information

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

No dangerous reactions known under normal conditions of use.

10.2. Chemical stability

Stable under normal storage conditions. Keep dry in storage. May form combustible dust concentrations in air.

10.3. Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use.

10.4. Conditions to avoid

Sparks. Open flame. Heat. Incompatible materials. Avoid dust formation.

10.5. Incompatible materials

Acids. Strong oxidizing agents.

10.6. Hazardous decomposition products

May include, and are not limited to: oxides of carbon, oxides of nitrogen.

SECTION 11: Toxicological information

11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008

Acute toxicity (oral)	: Not classified. (Based on available data, the classification criteria are not met.)
Acute toxicity (dermal)	: Not classified. (Based on available data, the classification criteria are not met.)
Acute toxicity (inhalation)	: Not classified. (Based on available data, the classification criteria are not met.)

Carbon black (1333-86-4)

LD50 oral rat	> 8000 mg/kg Source: ECHA
LD50 dermal rat	> 2000 mg/kg (Source: ECHA)

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Carbon black (1333-86-4)

LD50 dermal rabbit	> 8000 mg/kg Source: ECHA
Skin corrosion/irritation	: Not classified. (Based on available data, the classification criteria are not met.) pH: Negligible solubility
Additional information	: Based on available data, the classification criteria are not met.
Serious eye damage/irritation	: Not classified. (Based on available data, the classification criteria are not met.) pH: Negligible solubility
Additional information	: Based on available data, the classification criteria are not met.
Respiratory or skin sensitisation	: Not classified. (Based on available data, the classification criteria are not met.)
Additional information	: Based on available data, the classification criteria are not met.
Germ cell mutagenicity	: Not classified. (Based on available data, the classification criteria are not met.)
Additional information	: Based on available data, the classification criteria are not met.
Carcinogenicity	: Not classified. (Based on available data, the classification criteria are not met.)
Additional information	: Based on available data, the classification criteria are not met.

Carbon black (1333-86-4)

IARC group	2B - Possibly carcinogenic to humans
Reproductive toxicity	: Not classified. (Based on available data, the classification criteria are not met.)
Additional information	: Based on available data, the classification criteria are not met.
STOT-single exposure	: Not classified. (Based on available data, the classification criteria are not met.)
Additional information	: Based on available data, the classification criteria are not met.
STOT-repeated exposure	: Not classified. (Based on available data, the classification criteria are not met.)
Additional information	: Based on available data, the classification criteria are not met.

Carbon black (1333-86-4)

NOAEL (oral, rat, 90 days)	> 1000 mg/kg bodyweight Animal: rat, Guideline: OECD Guideline 408 (Repeated Dose 90-Day Oral Toxicity Study in Rodents)
Aspiration hazard	: Not classified. (Based on available data, the classification criteria are not met.)
Additional information	: Based on available data, the classification criteria are not met.

11.2. Information on other hazards

Endocrine disrupting properties

Adverse health effects caused by endocrine disrupting properties	: The mixture does not contain substance(s) included in the list established in accordance with Article 59(1) of REACH for having endocrine disrupting properties, or substance(s) are not identified as having endocrine disrupting properties in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at a concentration equal to or greater than 0,1 %
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Other information

Other information	: Likely routes of exposure: ingestion, inhalation, skin and eye
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SECTION 12: Ecological information

12.1. Toxicity

Ecology - general	: May cause long-term adverse effects in the aquatic environment.
Hazardous to the aquatic environment, short-term (acute)	: Not classified. (Based on available data, the classification criteria are not met.)
Hazardous to the aquatic environment, long-term (chronic)	: Not classified. (Based on available data, the classification criteria are not met.)

Carbon black (1333-86-4)

LC50 - Fish [1]	> 1000 mg/l Source: NITE
EC50 - Crustacea [1]	> 1000 mg/l Test organisms (species): Daphnia magna
EC50 72h - Algae [1]	> 10000 mg/l Test organisms (species): Desmodesmus subspicatus (previous name: Scenedesmus subspicatus)

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Carbon black (1333-86-4)

EC50 72h - Algae [2]	> 10000 mg/l Test organisms (species):
ErC50 algae	> 10000 mg/l Source: EHCA

12.2. Persistence and degradability

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Persistence and degradability	Not established.
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Carbon black (1333-86-4)

Persistence and degradability	Rapidly degradable
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12.3. Bioaccumulative potential

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Bioaccumulative potential	Not established.
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12.4. Mobility in soil

No additional information available

12.5. Results of PBT and vPvB assessment

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This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII

This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII

12.6. Endocrine disrupting properties

Adverse effects on the environment caused by endocrine disrupting properties : The mixture does not contain substance(s) included in the list established in accordance with Article 59(1) of REACH for having endocrine disrupting properties, or substance(s) are not identified as having endocrine disrupting properties in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at a concentration equal to or greater than 0,1 %.

12.7. Other adverse effects

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Other information	No other effects known
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SECTION 13: Disposal considerations

13.1. Waste treatment methods

Product/Packaging disposal recommendations : Dispose in a safe manner in accordance with local/national regulations. The generation of waste should be avoided or minimised wherever possible. Recover and recycle product if possible.

SECTION 14: Transport information

In accordance with ADR / IMDG / IATA

14.1. UN number or ID number

UN-No. (ADR) : Not regulated
UN-No. (IMDG) : Not regulated
UN-No. (IATA) : Not regulated

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14.2. UN proper shipping name

Proper Shipping Name (ADR) : Not regulated
Proper Shipping Name (IMDG) : Not regulated
Proper Shipping Name (IATA) : Not regulated

14.3. Transport hazard class(es)

ADR

Transport hazard class(es) (ADR) : Not regulated

IMDG

Transport hazard class(es) (IMDG) : Not regulated

IATA

Transport hazard class(es) (IATA) : Not regulated

14.4. Packing group

Packing group (ADR) : Not regulated
Packing group (IMDG) : Not regulated
Packing group (IATA) : Not regulated

14.5. Environmental hazards

Other information : No supplementary information available.

14.6. Special precautions for user

Overland transport

Not regulated

Transport by sea

Not regulated

Air transport

Not regulated

14.7. Maritime transport in bulk according to IMO instruments

Not applicable

SECTION 15: Regulatory information

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

EU-Regulations

REACH Annex XVII (Restriction List)

The synthetic polymer microparticles supplied are subject to conditions laid down by entry 78 of Annex XVII to Regulation (EC) No 1907/2006 of the European Parliament and of the Council

Entry	concentration of synthetic polymer microparticles in the substance or mixture	Particle size distribution
78	90-100%	50 - 60 µ

REACH Annex XIV (Authorisation List)

Contains no substance(s) listed on REACH Annex XIV (Authorisation List)

REACH Candidate List (SVHC)

Contains no REACH candidate substance.

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PIC Regulation (Prior Informed Consent)

Contains no substance(s) listed on the PIC list (Regulation EU 649/2012 concerning the export and import of hazardous chemicals)

POP Regulation (Persistent Organic Pollutants)

Contains no substance(s) listed on the POP list (Regulation EU 2019/1021 on persistent organic pollutants)

Ozone Regulation (2024/590)

Contains no substance(s) listed on the Ozone Depletion list (Regulation EU 2024/590 on substances that deplete the ozone layer)

Council Regulation (EC) for the control of dual-use items

Contains no substance subject to the COUNCIL REGULATION (EC) for the control of dual-use items

Explosives Precursors Regulation (EU 2019/1148)

Contains no substance(s) listed on the Explosives Precursors list (Regulation EU 2019/1148 on the marketing and use of explosives precursors)

Drug Precursors Regulation (EC 273/2004)

Contains no substance(s) listed on the Drug Precursors list (Regulation EC 273/2004 on the manufacture and the placing on market of certain substances used in the illicit manufacture of narcotic drugs and psychotropic substances)

15.2. Chemical safety assessment

No chemical safety assessment has been carried out

SECTION 16: Other information

Indication of changes:

SDS update.

Indication of changes		
Section	Changed item	Comments

Abbreviations and acronyms:

	CLP Abbreviations: °C – Degrees Celsius °F – Degrees Fahrenheit ADR – European Agreement concerning the International Carriage of Dangerous Goods by Road. ASTM: American Society for Testing and Materials ACGIH – American Conference of Governmental Industrial Hygienists ATE – Acute Toxicity Estimate BCF – Bioconcentration Factor BEI – Biological Exposure Index CAS – Chemical Abstracts Service CLP – Regulation (EC) No 1272/2008 on the Classification, Labeling and Packaging of substances and mixtures. CMR – Carcinogen, Mutagen, Reproductive toxin cP – centipoise (unit of dynamic viscosity) cSt – centistokes (unit of kinematic viscosity) DNEL – Derived No-effect Level DMEL – Derived Minimal Effect Level EC50 – Half maximal effective concentration ECHA – European Chemicals Agency EC-No. – European Community number EU – European Union GHS – Globally Harmonized System of Classification and Labelling of Chemicals h – Hours IATA – International Air Transport Association IC50 – Inhibition concentration IDLH – Immediately Dangerous to Life or Health IMDG – International Maritime Dangerous Goods IOELV – Indicative Occupational Exposure Limit Value KIFS – Swedish Chemicals Agency's (KemI's) Code of Statutes
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Abbreviations and acronyms:

kPa – kilopascal
Koc – Adsorption Coefficient
Kow – Octanol-Water Partition Coefficient
LC50 – Median Lethal Concentration
LD50 – Median Lethal Dose
LOAEL – Lowest Observed Adverse Effect level
mg/l – Milligram per liter
mg/kg – Milligram per kilogram
mg/m³ – Milligram per cubic meter
Min – Minutes
NIOSH – National Institute for Occupational Safety and Health
NOEC – No Observed Effect Concentration
NO(A)EL – No Observed (Adverse) Effect Level
N.O.S. – Not Otherwise Specified
OEL – Occupational Exposure Limit
PBT - Persistent, Bioaccumulative and Toxic
PCN – Poison Centre Notification
PNEC – Predicted No Effect Concentration
ppm – Parts per million
PVC – Polyvinyl chloride
REACH - Registration, Evaluation, Authorisation and Restriction of Chemicals Regulation (EC) No 1907/2006
RID – European Agreement concerning the International Carriage of Dangerous Goods by Rail
SDS – Safety Data Sheet
STEL – Short Term Exposure Limit
STOT – Specific Target Organ Toxicity
SVHC – Substance of Very High Concern (CMR, vPvB, PBT)
TDI – Tolerable Daily Intake
TLV – Threshold Limit Value
TWA – Time Weighted Average
UFI – Unique Formulation Identifier
UN – United Nations
vPvB - Very Persistent and Very Bioaccumulative
WEL – Workplace Exposure Limit
WGK – Wassergefährdungsklasse – German water quality classification

Data sources : REGULATION (EC) No 1272/2008 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 16 December 2008 on classification, labelling and packaging of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No 1907/2006.

Other information : Refer to NFPA 654, Standard for the Prevention of Fire and Dust Explosions from the Manufacturing, Processing, and Handling of Combustible Particulate Solids, for safe handling.

Prepared by : Nexreg Compliance Inc.
www.Nexreg.com



Safety Data Sheet (SDS), EU - Nexreg 2026

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