



PA 602, 603, 604-CF

Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878
Issue date: 7/16/2021 Revision date: 1/12/2026 Supersedes version of: 9/19/2023 Version: 2.2

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

1.1. Product identifier

Product form : Mixture
Product name : PA 602, 603, 604-CF

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

1.2.1. Relevant identified uses

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

1.2.2. Uses advised against

No additional information available

1.3. Details of the supplier of the safety data sheet

Manufacturer

Advanced Laser Materials, LLC.
3115 Lucius McCelvey Dr
76504 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 M-F, 8:00 a.m. – 5:00 p.m. (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]

Unknown acute toxicity (CLP) - SDS : 77% of the mixture consists of ingredient(s) of unknown acute toxicity (Oral)
100% of the mixture consists of ingredient(s) of unknown acute toxicity (Dermal)
100% of the mixture consists of ingredient(s) of unknown acute toxicity (Inhalation
(Dust/Mist))
Unknown hazards to the aquatic environment (CLP) : Contains 100% of components with unknown hazards to the aquatic environment

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 is 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

PA 602, 603, 604-CF

Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878

SECTION 3: Composition/information on ingredients

3.1. Substances

Not applicable

3.2. Mixtures

This mixture does not contain any substances to be mentioned according to the criteria of section 3.2 of REACH Annex II

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. 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 | : Carbon dioxide. Water spray. Foam. Dry chemical powder. |
| 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). |
|--------------------------------|--|

PA 602, 603, 604-CF

Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878

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.

6.1.1. For non-emergency personnel

No additional information available

6.1.2. For emergency responders

No additional information available

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. Minimize 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. When using do not eat or drink. Avoid contact with skin and eyes. Good housekeeping is important to prevent accumulation of dust. The use of compressed air for cleaning clothing, equipment, etc, is not recommended. Do not breathe dust. Do not swallow. Handle and open container with care. If spilled, may cause the floor to be slippery. Take precautionary measures against static discharge. Use only in well ventilated areas. 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 out of the reach of children. Store in dust-tight, dry, labelled containers. Keep cool. Keep container tightly closed. Avoid any dust buildup by frequent cleaning and suitable construction of the storage area.

7.3. Specific end use(s)

Specialty nylon composite for sintering.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

8.1.1. National occupational exposure and biological limit values

No additional information available

8.1.2. Recommended monitoring procedures

No additional information available

PA 602, 603, 604-CF

Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878

8.1.3. Air contaminants formed

No additional information available

8.1.4. DNEL and PNEC

Additional information : Not applicable

8.1.5. Control banding

No additional information available

8.2. Exposure controls

8.2.1. 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.

8.2.2. Personal protection equipment

Personal protective equipment:

Avoid all unnecessary exposure.

8.2.2.1. Eye and face protection

Eye protection:

Safety glasses or goggles are recommended when using product.

8.2.2.2. Skin protection

Skin and body protection:

Wear suitable protective clothing

Hand protection:

Wear suitable gloves

8.2.2.3. 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.

8.2.2.4. Thermal hazards

Thermal hazard protection:

Use personal protective equipment as required.

8.2.3. Environmental exposure controls

Environmental exposure controls:

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 (powder) |
| Colour | : Grey. |
| Odour | : Odourless. |
| Odour threshold | : Not available |
| Melting point | : > 80 °C (> 176 °F) |
| Freezing point | : Not available |
| Boiling point | : Not available |
| Flammability | : Combustible dust |
| Explosive limits | : Not applicable |

PA 602, 603, 604-CF

Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878

| | |
|---|-------------------------|
| Lower explosive limit (LEL) | : 60 g/m ³ |
| Upper explosive limit (UEL) | : Not applicable |
| Flash point | : > 350 °C (> 662 °F) |
| Auto-ignition temperature | : Not applicable |
| Decomposition temperature | : Not available |
| pH | : Negligible solubility |
| pH solution | : Not available |
| Viscosity, kinematic | : Not applicable |
| Solubility | : Negligible. |
| Partition coefficient n-octanol/water (Log Kow) | : Not available |
| Vapour pressure | : Not applicable |
| Vapour pressure at 50 °C | : Not applicable |
| Density | : Not available |
| Relative density | : 1.2 g/cc |
| Relative vapour density at 20 °C | : Not applicable |
| Particle size | : Not Available. |
| Particle size distribution | : Not available |
| Particle shape | : Not available |
| Particle aspect ratio | : Not available |
| Particle aggregation state | : Not available |
| Particle agglomeration state | : Not available |
| Particle specific surface area | : Not available |
| Particle dustiness | : Not available |

9.2. Other information

9.2.1. Information with regard to physical hazard classes

No additional information available

9.2.2. Other safety characteristics

Minimum ignition energy : With Inductance: 100 mJ < MIE < 300 mJ
Without Inductance: MIE > 1000 mJ

SECTION 10: Stability and reactivity

10.1. Reactivity

No dangerous reactions known under normal conditions of use.

10.2. Chemical stability

Stable under normal conditions. 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

Heat. Ignition sources. Incompatible materials. Avoid dust formation.

10.5. Incompatible materials

Acids. Bases. 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.
Acute toxicity (dermal) : Not classified.

PA 602, 603, 604-CF

Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878

| | |
|------------------------------------|---|
| Acute toxicity (inhalation) | : Not classified. |
| Unknown acute toxicity (CLP) - SDS | : 77% of the mixture consists of ingredient(s) of unknown acute toxicity (Oral) 100% of the mixture consists of ingredient(s) of unknown acute toxicity (Dermal) 100% of the mixture consists of ingredient(s) of unknown acute toxicity (Inhalation (Dust/Mist)) |
| Skin corrosion/irritation | : Not classified. |
| Additional information | : Based on available data, the classification criteria are not met. |
| Serious eye damage/irritation | : Not classified. |
| Additional information | : Based on available data, the classification criteria are not met. |
| Respiratory or skin sensitisation | : Not classified. |
| Additional information | : Based on available data, the classification criteria are not met. |
| Germ cell mutagenicity | : Not classified. |
| Additional information | : Based on available data, the classification criteria are not met. |
| Carcinogenicity | : Not classified. |
| Additional information | : Based on available data, the classification criteria are not met. |
| Reproductive toxicity | : Not classified. |
| Additional information | : Based on available data, the classification criteria are not met. |
| STOT-single exposure | : Not classified. |
| Additional information | : Based on available data, the classification criteria are not met. |
| STOT-repeated exposure | : Not classified. |
| Additional information | : Based on available data, the classification criteria are not met. |
| Aspiration hazard | : Not classified. |
| Additional information | : Based on available data, the classification criteria are not met. |

PA 602, 603, 604-CF (EU)

| | |
|----------------------|----------------|
| Viscosity, kinematic | Not applicable |
|----------------------|----------------|

11.2. Information on other hazards

11.2.1. Endocrine disrupting properties

| | |
|---------------------------------|--|
| 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 is 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 |
|---------------------------------|--|

11.2.2. Other information

| | |
|-------------------|--|
| Other information | : Likely routes of exposure: ingestion, inhalation, skin and eye |
|-------------------|--|

SECTION 12: Ecological information

12.1. Toxicity

| | |
|---|---|
| Ecology - general | : May cause long-term adverse effects in the aquatic environment. |
| Unknown hazards to the aquatic environment (CLP) | : Contains 100% of components with unknown hazards to the aquatic environment |
| Hazardous to the aquatic environment, short-term (acute) | : Not classified. |
| Hazardous to the aquatic environment, long-term (chronic) | : Not classified. |

12.2. Persistence and degradability

PA 602, 603, 604-CF (EU)

| | |
|-------------------------------|------------------|
| Persistence and degradability | Not established. |
|-------------------------------|------------------|

12.3. Bioaccumulative potential

PA 602, 603, 604-CF (EU)

| | |
|---------------------------|------------------|
| Bioaccumulative potential | Not established. |
|---------------------------|------------------|

PA 602, 603, 604-CF

Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878

12.4. Mobility in soil

No additional information available

12.5. Results of PBT and vPvB assessment

PBT : No

vPvB : No

PA 602, 603, 604-CF (EU)

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

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 is 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

12.7. Other adverse effects

Additional information : No other effects known

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 minimized 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

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

PA 602, 603, 604-CF

Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878

14.5. Environmental hazards

Dangerous for the environment : No
Marine pollutant : No
Other information : No supplementary information available.

14.6. Special precautions for user

Special transport precautions : Do not handle until all safety precautions have been read and understood.

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

15.1.1. 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 | 100% | 40-60 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.

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 (1005/2009)

Contains no substance(s) listed on the Ozone Depletion list (Regulation EU 1005/2009 on substances that deplete the ozone layer)

Dual-Use Regulation (428/2009)

Contains no substance subject to the COUNCIL REGULATION (EC) No 428/2009 of 5 May 2009 setting up a Community regime for the control of exports, transfer, brokering and transit of dual-use items.

Explosives Precursors Regulation (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 (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)

PA 602, 603, 604-CF

Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878

15.1.2. National regulations

Germany

Water hazard class (WGK) : WGK 1, Slightly hazardous to water (Classification according to AwSV, Annex 1)
Hazardous Incident Ordinance (12. BImSchV) : Is not subject of the Hazardous Incident Ordinance (12. BImSchV)

15.2. Chemical safety assessment

No chemical safety assessment has been carried out

SECTION 16: Other information

| Indication of changes | | | |
|-----------------------|--|----------|----------|
| Section | Changed item | Change | Comments |
| SDS | SDS update | Modified | V1.1 |
| 9 | Physical and chemical properties | Modified | V1.2 |
| 15.1 | Entry 78 of Annex XVII to Regulation (EC) No 1907/2006 | Added | V2.2 |

Abbreviations and acronyms

| |
|--|
| °C – Degrees Celsius |
| °F – Degrees Fahrenheit |
| ADR – European Agreement concerning the International Carriage of Dangerous Goods by Road. |
| 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 |
| 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/m ³ – 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 |

PA 602, 603, 604-CF

Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878

Abbreviations and acronyms

| |
|---|
| 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 Annex II 2021

Disclaimer: We believe the statements, technical information and recommendations contained herein are reliable, but they are given without warranty or guarantee of any kind. The information contained in this document applies to this specific material as supplied. It may not be valid for this material if it is used in combination with any other materials. It is the user's responsibility to satisfy oneself as to the suitability and completeness of this information for the user's own particular use.