



Revision Date 25/09/2017
Date of the previous version 01/06/2012

Version 3
EU EN

SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1. Product identifier

Product Name	Melamine
Trade name	MelaminebyOCI™ GPH MelaminebyOCI™ GPH LD MelaminebyOCI™ SLP Melafine®
Chemical Name	1,3,5-Triazine-2,4,6-triamine
CAS-No	108-78-1
EC-No	203-615-4
REACH Registration Number	01-2119485947-16-0000
Synonyms	Cyanuramide; Cyanurotriamide; 2,4,6-Triamino-s-triazine
Formula	C ₃ H ₆ N ₆

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

Recommended Use	Industrial application: White crystalline powder, used in high performance products like wood-based panels, laminates, coatings, molding powders, concrete plasticizers and flame retardants.
Uses advised against	Addition to food or feed products.

1.3. Details of the supplier of the safety data sheet

OCI Nitrogen BV
Mijnweg 1
P.O. Box 601
6160 AP Geleen, The Netherlands
Tel: +31 (0) 46 7020111
www.ocinitrogen.com

OCI Melamine Americas, Inc.
C/O Advanced Louisiana Logistics
501 Louisiana Avenue, Suite 201
Baton Rouge, LA 70802, USA
Tel: +1 (225) 685 30 20 / 685 30 37
Fax: +1 (225) 685 30 03

OCI Trading Shanghai
17N, Feizhou Guoji Building
No. 899 Lingling Road
Shanghai 200030, China
Tel: +86 (0)21 64415441
Fax: +86 (0)21 64415440.

1.4. Emergency telephone number

Manufacturer: Alert & Care Centre Chemelot (Geleen, The Netherlands)
+31 46 4765555 (24/7)

SECTION 2: HAZARDS IDENTIFICATION

2.1. Classification of the substance or mixture

Classification (1272/2008/EC)
Not classified.

2.2. Label elements

None.

2.3 Other hazards

None known.

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substances

Chemical Name	EC-No	CAS-No	Weight %	Classification (1272/2008/EC)	REACH Registration Number
2,4,6-Triamino-1,3,5-triazine	203-615-4	108-78-1	100	-	01-2119485947-16-0000

SECTION 4: FIRST AID MEASURES

4.1. Description of first aid measures

General advice	No hazards which require special first aid measures.
Eye contact	Immediately flush with plenty of water. After initial flushing, remove any contact lenses and continue flushing for at least 15 minutes. Get medical attention immediately if symptoms occur.
Skin contact	Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes.
Ingestion	Rinse mouth. Do not induce vomiting without medical advice. Never give anything by mouth to an unconscious person. Get medical attention immediately if symptoms occur.
Inhalation	Remove to fresh air and keep at rest in a position comfortable for breathing. If breathing is irregular or stopped, administer artificial respiration. Get medical attention immediately if symptoms occur.
Protection of first-aiders	Use personal protective equipment. Avoid contact with skin, eyes and clothing.

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

Main symptoms	Inhalation of dust in high concentration may cause irritation of respiratory system. Dust contact with the eyes can lead to mechanical irritation.
----------------------	--

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

Notes to physician	Treat symptomatically. Hazardous decomposition products formed under fire conditions: Effects of contact or inhalation may be delayed.
---------------------------	--

SECTION 5: FIREFIGHTING MEASURES

5.1. Extinguishing media

Suitable Extinguishing Media	The product itself does not burn. Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
Unsuitable Extinguishing Media	None known.

5.2. Special hazards arising from the substance or mixture

Special Hazard	Thermal decomposition can lead to release of irritating gases and vapours: Carbon oxides, Nitrogen oxides (NO _x), Amines, Ammonia, Hydrogen cyanide (Above 600°C).
-----------------------	--

5.3. Advice for firefighters

Special protective equipment for fire-fighters	As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.
---	--

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1. Personal precautions, protective equipment and emergency procedures

Evacuate non-essential personnel. Do not touch or walk through spilled material. Avoid contact with skin, eyes and clothing. Do not breathe dust. For personal protection see section 8.

6.2. Environmental precautions

Avoid release to the environment. Do not flush into surface water or sanitary sewer system. Avoid subsoil penetration. Prevent product from entering drains. Local authorities should be advised if significant spillages cannot be contained.

6.3 Methods and material for containment and cleaning up

Avoid dust formation. Pick up and transfer to properly labelled containers. Dispose of contents/container in accordance with local regulations.

6.4. Reference to other sections

Section 1, 8, 13.

SECTION 7: HANDLING AND STORAGE

7.1 Precautions for safe handling

Wear personal protective equipment. Avoid contact with skin, eyes and clothing. Handle in accordance with good industrial hygiene and safety practice. Do not eat, drink or smoke when using this product. Do not breathe dust. Remove and wash contaminated clothing before re-use. Keep away from fire. Avoid dust formation in confined areas. Ensure adequate ventilation. In case of insufficient ventilation, wear suitable respiratory equipment.

7.2. Conditions for safe storage, including any incompatibilities

Store in accordance with local regulations. Keep containers tightly closed in a dry, cool and well-ventilated place. Keep in properly labelled containers. Keep away from direct sunlight, Oxidizing agents.
Recommendation(s): (1) Do not stack big bags > 1000 kg. Do not stack more than two bulk bags <=1000 kg on top of each other in connection with the risk of ripping. (2) 'MelaminebyOCI SLP' may not be stacked.

7.3. Specific end use(s)

Exposure scenario Not available.

Other information Not available.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1. Control parameters

Exposure Limits Contains no substances with occupational exposure limit values.

Recommended monitoring procedures No information available.

Derived No Effect Level (DNEL)

Chemical Name	Worker - inhalative, long-term - systemic	Worker - dermal, long-term - systemic	Worker - inhalative, short-term - systemic	Worker - dermal, short-term - systemic
2,4,6-Triamino-1,3,5-triazine	8.9 mg/m ³	12.6 mg/kg bw/day	11 mg/m ³	126 mg/kg bw/d

Chemical Name	Consumer - inhalative, long-term - systemic	Consumer - dermal, long-term - systemic	Consumer - oral, long-term - systemic	Consumer - inhalative, short-term - systemic	Consumer - dermal, short-term - local and systemic
2,4,6-Triamino-1,3,5-triazine	2.2 mg/m ³	6.3 mg/kg bw/day	0.63 mg/kg bw/day	-	-

Predicted No Effect Concentration (PNEC)

Chemical Name	Freshwater	Marine water	Intermittent release	Sewage treatment plant	Freshwater sediment	Marine sediment	Soil	Oral
2,4,6-Triamino-1,3,5-triazine	0.51 mg/L	0.051 mg/L	2 mg/L	200 mg/L	5.5 mg/kg sediment dw	0.55 mg/kg sediment dw	1.6 mg/kg soil dw	-

8.2. Exposure controls

Appropriate engineering controls Ensure adequate ventilation, especially in confined areas.

Individual protection measures, such as personal protective equipment

Eye protection	Tightly fitting safety goggles.
Hand Protection	Protective gloves: Neoprene gloves, PVC, (4-8 hours Break through time) (EN 374).
Skin and body protection	Long sleeved clothing.
Respiratory protection	If exposure limits are exceeded or irritation is experienced, NIOSH/MSHA approved respiratory protection should be worn. Respiratory protection must be provided in accordance with current local regulations.
Recommended Filter Type	P2

Hygiene Measures Handle in accordance with good industrial hygiene and safety practice. Avoid contact with skin, eyes and clothing. Remove and wash contaminated clothing before re-use. Do not eat, drink or smoke when using this product. Ensure that eyewash stations and safety showers are close to the workstation location.

Environmental Exposure Controls The product should not be allowed to enter drains, water courses or the soil.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on basic physical and chemical properties

Physical state @20°C	Solid
Appearance	Powder (Crystalline)
Colour	White
Odour	Odourless / Ammoniacal
pH	7.8 - 9.5 Conc. (% w/w): 10% (as aqueous solution)
Melting/freezing point	354 °C / 669.2 °F (with vaporization)
Boiling point/boiling range	Decomposes >280 °C / >536 °F
Flash point	Closed cup >280 °C / >536 °F
Evaporation rate	Not applicable
Flammability (solid, gas)	Not flammable
Flammability Limits in Air	Not applicable
Vapour pressure	<0.02 (<15 mm Hg) kPa (@20°C)
Vapour density	4.34 (air = 1)
Relative density	1.57 (@20°C / 68°F)
Solubility	
Water solubility	Slightly soluble 0.348 g/100 ml (@20 °C)
Partition Coefficient (n-octanol/water)	log Pow = -1.14
Autoignition temperature	>500 °C / >932 °F
Decomposition temperature	>280 °C / >536 °F
Viscosity, dynamic	No information available
Explosive properties	Not explosive (On basis of test data)
Oxidising properties	Not oxidizing

9.2 Other information

Molecular Weight	126.12 g/mol
Specific Gravity	1.57 g/cm ³
Minimum ignition temperature	658 °C / 1216.4 °F

SECTION 10: STABILITY AND REACTIVITY

10.1. Reactivity

Hazardous polymerisation does not occur.

10.2. Chemical stability

Stable under normal conditions.

10.3 Possibility of hazardous reactions

None under normal processing.

10.4. Conditions to avoid

Heat, flames and sparks.

10.5. Incompatible materials

Oxidizing agents.

10.6. Hazardous decomposition products

None under normal use. Thermal decomposition can lead to release of irritating gases and vapours: Carbon monoxide (CO), Carbon dioxide (CO₂), Nitrogen oxides (NO_x), Amines, Ammonia, Hydrogen cyanide >600°C.

SECTION 11: TOXICOLOGICAL INFORMATION

11.1. Information on toxicological effects

Acute toxicity

Ingestion

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

Skin contact

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

Inhalation

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

Chemical Name	LD50 Oral	LD50 Dermal	LC50 Inhalation
2,4,6-Triamino-1,3,5-triazine	3161 mg/kg bw (Rat)	-	>5190 mg/m ³ air 4h (Rat)

Skin corrosion/irritation

No known effect.

Serious eye damage/irritation

Dust contact with the eyes can lead to mechanical irritation.

Respiratory or skin sensitisation

No known effect.

Germ cell mutagenicity

Not known to cause heritable genetic damage.

Carcinogenicity

In feeding studies in rats and mice, transitional-cell carcinomas in the urinary bladder were observed only for male rats and only at high doses of melamine in the diet. No carcinomas were found for female rats or for mice of either sex. There is no evidence that melamine can cause cancer to humans.

Reproductive toxicity

Not known to cause birth defects or have a deleterious effect on a developing fetus. Not known to adversely affect reproductive functions and organs.

STOT-single exposure

No known effect.

STOT-repeated exposure

No known effect.

Aspiration hazard

No known effect.

Other information

Although exposure to high levels of melamine can cause bladder stones in humans there is no evidence for cancer developing as a result of exposure to melamine. Melamine is classified by the International Agency for Research on Cancer (IARC) as Group 2B (possibly carcinogenic to humans).

SECTION 12: ECOLOGICAL INFORMATION

12.1. Toxicity

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

Chemical Name	Toxicity to algae	Toxicity to fish	Toxicity to microorganisms	Toxicity to daphnia and other aquatic invertebrates
2,4,6-Triamino-1,3,5-triazine	EC50: 325 mg/L 96h Pseudokirchneriella subcapitata NOEC: 98 mg/L 96h Pseudokirchneriella subcapitata	LC50: >3000 mg/L 96h Oncorhynchus mykiss NOEC: >=5.1 mg/L 36d Pimephales promelas	EC0: > 100 mg/L 2h Nitrosomonas sp. and Nitrobacter sp.	NOEC: >= 11 mg/L 21d Daphnia magna (reproduction)

12.2. Persistence and degradability

Not readily biodegradable. Not inherently biodegradable.

12.3. Bioaccumulative potential

Bioaccumulation is unlikely.

Chemical Name	Log P _{ow}	Bioconcentration factor (BCF)
2,4,6-Triamino-1,3,5-triazine	-1.14	<0.38

12.4. Mobility in soil

No information available.

12.5. Results of PBT and vPvB assessment

This product is not considered to be persistent, bioaccumulative and toxic (PBT) or very persistent and very bioaccumulative (vPvB).

12.6. Other adverse effects

No information available.

SECTION 13: DISPOSAL CONSIDERATIONS

13.1. Waste treatment methods

Waste from residues / unused products

Dispose of in accordance with local regulations.

Contaminated packaging

Empty containers should be taken to an approved waste handling site for recycling or disposal.

SECTION 14: TRANSPORT INFORMATION

According to: ADR, RID, ADN, IMDG, IATA/ICAO.

14.1. UN number

Not regulated.

14.2. UN proper shipping name

Not regulated.

14.3. Transport hazard class(es)

Not regulated.

14.4. Packing group

Not regulated.

14.5 Environmental hazards

Not applicable.

14.6 Special precautions for user

Not applicable.

14.7 Transport in bulk according to Annex II of MARPOL and the IBC Code

Not applicable.

SECTION 15: REGULATORY INFORMATION**15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture**

Restrictions on use None.

Other Regulations None.

WGK Classification Water endangering class = 1

15.2 Chemical safety assessment

A Chemical Safety Assessment has been carried out for this substance.

SECTION 16: OTHER INFORMATION**Full text of H-Statements referred to under sections 2 and 3**

Not applicable

Abbreviations and acronyms

STOT: Specific Target Organ Toxicity
PBT: Persistent, Bioaccumulative, Toxic
vPvB: very Persistent and very Bioaccumulating
ADR: Accord européen relatif au transport international des marchandises Dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
EC: European Commission
RID: Règlement concernant le transport international ferroviaire des marchandises dangereuses (Regulations for the International Transport of Dangerous Goods by Rail)
ADN: Accord européen relatif au transport international des marchandises Dangereuses par voies de Navigation intérieures (European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways)
ICAO: International Civil Aviation Organization
REACH: Registration, Evaluation, Authorisation and Restriction of Chemical substances
ES: Exposure Scenario
DNEL: Derived No Effect Level
PNEC: Predicted No Effect Concentration
IARC: International Agency for Research on Cancer

Revision Note

Format updated in compliance with European REACH and CLP regulations.

Training Advice

Workers must be trained in the proper use and handling of this product as required under applicable regulations.

SDS No.

OC00016

Disclaimer

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.