Material Safety Data Sheet

SHANDONG SHUNTIAN CHEMICAL GROUP CO., LTD
NO. 11 YUQUAN ROAD, YINAN COUNTY, SHANDONG, CHINA
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Date of Revision: 01/01/2021 **MELAMINE**

Section 1 - Chemical Product

Product/Chemical Name: Melamine
Chemical Formula: $C_3H_6N_6$
CAS Number: 108-78-1
Manufacturer: SHANDONG SHUNTIAN CHEMICAL GROUP CO., LTD NO.11 YUQUAN ROAD, YINAN COUNTY, SHANDONG CHINA
Other Designations: 2,4,6-Triamino-S-Triazine; Aero; Cyanuramide; Cyanurotriamide; Cyanurotriamine; Cymel
General Use: Raw material for melamine formaldehyde MF synthetic resins. Component of intumescent paints.

Section 2 - Hazards Identification

☆☆☆☆☆ **Emergency Overview** ☆☆☆☆☆

Colorless solid prisms. Irritating to eyes/skin/respiratory tract. Also causes: GI irritation. Chronic effects: dermatitis, increased incidence of bladder stones and cancers. Gives off highly toxic hydrogen cyanide when heated to decomposition.

Potential Health Effects

Primary Entry Routes: inhalation, ingestion
Target Organs: skin, eyes, respiratory system, gastrointestinal (GI) tract
HAZARDS IDENTIFICATION
Classification of the substance or mixture
GHS Classification in accordance with 29 CFR 1910 (OSHA HCS)
Combustible dust,
GHS Label elements, including precautionary statements
Pictogram none
Signal word Warning
Hazard statement(s)
May form combustible dust concentrations in air
Precautionary statement(s)
none
Hazards not otherwise classified (HNOC) or not covered by GHS
Combustible dust
Acute Effects
Eye: Causes eye irritation.
Skin: Prolonged and/or repeated contact may cause irritation and/or dermatitis.
Ingestion: May cause gastrointestinal irritation with nausea, vomiting and diarrhea.
Inhalation: May cause irritation of the respiratory tract with burning pain in the nose and throat, coughing, wheezing, shortness of breath and pulmonary edema.
Carcinogenicity: IARC, NTP, and OSHA do not list Melamine as a carcinogen.
Medical Conditions Aggravated by Long-Term Exposure:
Chronic Effects: May cause cancer according to animal studies. May cause reproductive and fetal effects.

Section 3 - Composition / Information on Ingredients

Ingredient Name	CAS Number	EINECS/ELINCS	% wt *or* % vol

Melamine	108-78-1	203-615-4	100

Appearance/General Info: White crystalline powder with low odor. Slightly soluble in hot alcohol, insoluble in ether. Sublimes. Bulk density 300-500 g/L.

	OSHA PEL		ACGIH TLV		NIOSH REL		NIOSH
Ingredient	**TWA**	**STEL**	**TWA**	**STEL**	**TWA**	**STEL**	**IDLH**
Melamine	none estab.	none estab.	none estab.	none estab.	none estab.	none estab.	none estab.

Section 4 - First Aid Measures

Eye Contact: Immediately flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical aid immediately.
Skin: Immediately flush skin with plenty of soap and water for at least 15 minutes while removing contaminated clothing and shoes. Get medical aid if irritation develops or persists. Wash clothing before reuse.
Ingestion: Do NOT induce vomiting. If victim is conscious and alert, give 2-4 cupfuls of milk or water. Never give anything by mouth to an unconscious person. Get medical aid immediately.
Inhalation: Remove from exposure to fresh air immediately. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical aid.
After first aid, get appropriate in-plant, paramedic, or community medical support.
Note to Physicians: Treat symptomatically.
Special Precautions/Procedures:

Section 5 - Fire-Fighting Measures

Flash Point: Nonflammable
Burning Rate:
Autoignition Temperature: > 260 °C
LEL: N/A
UEL: N/A
Flammability Classification: Nonflammable
Extinguishing Media: Use water spray, dry chemical, carbon dioxide, or chemical foam. Use agent most appropriate to extinguish fire.
Unusual Fire or Explosion Hazards: Combustible. Slight fire hazard when exposed to heat or flame.
Hazardous Combustion Products: Heating may cause expansion or decomposition leading to violent rupture of containers. Combustion products include carbon dioxide (CO_2), nitrogen oxides (NO x), ammonia and minor amounts of hydrogen cyanide.
Fire-Fighting Instructions: Do not release runoff from fire control methods to sewers or waterways.
Fire-Fighting Equipment: Because fire may produce toxic thermal decomposition products, wear a self-contained breathing apparatus (SCBA) with a full facepiece operated in pressure-demand or positive-pressure mode.

Section 6 - Accidental Release Measures

Spill /Leak Procedures:
Small Spills: Clean up all spills immediately. Avoid contact with skin and eyes. Vacuum up or sweep up. Place spilled material in clean, dry, sealable, labeled container.
Large Spills
Containment: For large spills, dike far ahead of spill for later disposal. Recover product wherever possible. Avoid generating dust. Sweep / shovel up. If required, wet with water to prevent dusting. Put residues in labeled plastic bags or other containers for disposal. Do not release into sewers or waterways.
Cleanup: Wear impervious gloves and safety glasses. Use dry clean-up procedures and avoid generating dust.
Regulatory Requirements: Follow applicable OSHA regulations (29 CFR 1910.120).

Section 7 - Handling and Storage

Handling Precautions: Wash thoroughly after handling. Use with adequate ventilation. Avoid contact with eyes, skin, and clothing. Keep container tightly closed. Avoid ingestion and inhalation. Wash clothing before reuse.
Storage Requirements: Store in a cool, dry place. Keep container closed when not in use.

Section 8 - Exposure Controls / Personal Protection

Engineering Controls:

Ventilation: Provide general or local exhaust ventilation systems to maintain airborne concentrations below OSHA PELs (Sec. 2). Local exhaust ventilation is preferred because it prevents contaminant dispersion into the work area by controlling it at its source.

Administrative Controls:

Respiratory Protection: Seek professional advice prior to respirator selection and use. Follow OSHA respirator regulations (29 CFR 1910.134) and, if necessary, wear a MSHA/NIOSH-approved respirator. Select respirator based on its suitability to provide adequate worker protection for given working conditions, level of airborne contamination, and presence of sufficient oxygen. For emergency or non-routine operations (cleaning spills, reactor vessels, or storage tanks), wear an SCBA. *Warning! Air-purifying respirators do not protect workers in oxygen-deficient atmospheres.* If respirators are used, OSHA requires a written respiratory protection program that includes at least: medical certification, training, fit-testing, periodic environmental monitoring, maintenance, inspection, cleaning, and convenient, sanitary storage areas.

Protective Clothing/Equipment: Wear chemically protective gloves, boots, aprons, and gauntlets to prevent prolonged or repeated skin contact. Wear protective eyeglasses or chemical safety goggles, per OSHA eye- and face-protection regulations (29 CFR 1910.133). Contact lenses are not eye protective devices. Appropriate eye protection must be worn instead of, or in conjunction with contact lenses.

Safety Stations: Make emergency eyewash stations, safety/quick-drench showers, and washing facilities available in work area.

Contaminated Equipment: Separate contaminated work clothes from street clothes. Launder before reuse. Remove this material from your shoes and clean personal protective equipment.

Comments: Never eat, drink, or smoke in work areas. Practice good personal hygiene after using this material, especially before eating, drinking, smoking, using the toilet, or applying cosmetics.

Section 9 - Physical and Chemical Properties

Physical State: Solid
Appearance: White crystalline powder
Odor:
Vapor Pressure: 50 mm Hg at 315 °C)
Vapor Density (Air=1): 4.34
Formula Weight: 126.08
Density/Specific Gravity (H_2O=1, at 4 °C): 1.57
pH: Not applicable
pH (1% Solution): 7.0 approx.

Water Solubility: Slightly soluble in water.
Boiling Point: Sublimes
Freezing/Melting Point: < 250 °C (482 °F)
Decomposition Temperature (°C): > 360
Other Solubilities:
Viscosity:
Refractive Index:
Surface Tension:
% Volatile:
Evaporation Rate:

Section 10 - Stability and Reactivity

Stability: Melamine is stable at room temperature in closed containers under normal storage and handling conditions.
Polymerization: Hazardous polymerization cannot occur.
Chemical Incompatibilities: Avoid contamination with oxidizing agents i.e. nitrates, oxidizing acids, chlorine bleaches, pool chlorine etc. as ignition may result.
Conditions to Avoid: Incompatible materials, dust generation, excess heat, strong oxidants.
Hazardous Decomposition Products: Thermal oxidative decomposition of Melamine can produce nitrogen oxides, carbon monoxide, irritating and toxic fumes and gases, carbon dioxide, cyanide fumes, nitrogen..

Section 11- Toxicological Information

Toxicity Data:*

Acute Oral Effects:
Rat, oral, LD_{50}: 3161 mg/kg
Eye Effects:
Eye, rabbit: 500 mg/24h mild
Skin Effects:
Skin, rabbit: LD50 = >1 gm/kg

Chronic Effects: No information available.
Carcinogenicity: No information available.
Mutagenicity: No information available.
Teratogenicity: No information available.

* See NIOSH, *RTECS* (OS0700000), for additional toxicity data.

Section 12 - Ecological Information

Ecotoxicity: Daphnia magna 48h EC_{50} >2,000 mg/l Fishes: guppy 96h LC_{10} 4,400 mg/l
Environmental Fate: No data found.
Environmental Degradation:
Soil Absorption/Mobility:

Section 13 - Disposal Considerations

Disposal: Contact your supplier or a licensed contractor for detailed recommendations. Follow applicable Federal, state, and local regulations.
Disposal Regulatory Requirements:
Container Cleaning and Disposal:

Section 14 - Transport Information

US DOT(49 CFR 172.101): Non-hazardous for transportation.	**IATA** Non-hazardous for transportation.
TDG Non-hazardous for transportation.	**IMDG/IMO: Not Regulated** Non-hazardous for transportation.

Section 15 - Regulatory Information

US FEDERAL
TSCA
CAS# 108-78-1 is listed on the TSCA inventory.
Health & Safety Reporting List
None of the chemicals are on the Health & Safety Reporting List.
Chemical Test Rules
None of the chemicals in this product are under a Chemical Test Rule.
Section 12b
None of the chemicals are listed under TSCA Section 12b.
TSCA Significant New Use Rule
None of the chemicals in this material have a SNUR under TSCA.
SARA
Section 302 (RQ)
None of the chemicals in this material have an RQ.
Section 302 (TPQ)
None of the chemicals in this product have a TPQ.
Section 313
No chemicals are reportable under Section 313.
Clean Air Act:
This material does not contain any hazardous air pollutants. This material does not contain any Class 1 Ozone depletors. This material does not contain any Class 2 Ozone depletors.
Clean Water Act:
None of the chemicals in this product are listed as Hazardous Substances under the CWA. None of the chemicals in this product are listed as Priority Pollutants under the CWA. None of the chemicals in this product are listed as Toxic Pollutants under the CWA.
OSHA: None of the chemicals in this product are considered highly hazardous by OSHA.
STATE
CAS# 108-78-1 can be found on the following state right to know lists
China No Significant Risk Level: None of the chemicals in this product are listed.

Hazard Symbols:
Risk Phrases:
R 36/37/38 Irritating to eyes, respiratory system and skin.
Safety Phrases: S 24/25 Avoid contact with skin and eyes. S 36/37/39 Wear suitable protective clothing, gloves and eye/face protection.

Section 16 - Other Information

Disclaimer: All information, recommendations and suggestions appearing herein are based upon sources believed to be reliable: However, it is the users responsibility to determine the safety, toxicity and suitability for its own use of this product. **SHANDONGSHUNTIAN CHEMICAL GROUP CO., LTD. DOES NOT ASSUME ANY LIABILITY ARISING OUT OF THE USE BY OTHERS OF THIS PRODUCT.**