



MSDS (Materials Safety Data Sheet) - Staron® Tempest

1. Product and Company Identification

- **PRODUCT NAME:** Staron® Tempest Sheet
- **COMPANY:** Cheil Industries Inc.
- **EMERGENCY TELEPHONE:** 82-61-689-1531
- **ADDRESS:** Yeosu Plant, Chemicals Division, CHEIL INDUSTRIES INC.
62, Pyong Yo-Dong, Yeosu-Shi, Cheon Nam, Korea

2. Composition/information on ingredients

- **INGREDIENT:** Acrylic Polymer
- **INGREDIENT SEQUENCE NUMBER:** 01
- **PERCENT:** 35 ~ 40
- **CAS NUMBER:** 9011 - 14 – 7

- **INGREDIENT:** Hydrated Alumina, Aluminum Hydroxide, Aluminum Trihydroxide
- **INGREDIENT SEQUENCE NUMBER:** 02
- **PERCENT:** 40 ~ 50
- **NIOSH(RTECS) NUMBER:** BD094000
- **CAS NUMBER:** 21645 - 51 – 2

- **INGREDIENTS:** Trade secret
- **INGREDIENT SEQUENCE NUMBER:** 03
- **PERCENT:** 10 ~ 25
- **CAS NUMBER:** Trade secret

3. Hazards identification

Staron® Tempest sheet is not hazardous when shipped. However, operations such as sawing, routing, drilling and sanding can generate dust. High concentrations of dust can irritate eyes, nose and respiratory passages and cause coughing and sneezing. Even though there are no exposure limits established for dust from Staron® Tempest sheet, avoid breathing dust. (See details in the Exposure Controls/Personal Protection section of this MSDS)

Staron® Tempest sheet does not off-gas at room temperature. At higher temperature, a small amount of methyl methacrylate can be released. The amount depends on temperature, time and other variables. Methyl methacrylate vapors can irritate eyes, skin, nose and throat and can cause allergic skin rashes. Over exposure to methyl methacrylate vapors can cause headaches, nausea, weakness, lung irritation and shortness of breath. Individuals with pre-existing lung or skin problems may be more susceptible to the effects of over exposure to methyl methacrylate.



4. First Aid Measures

- **INHALATION:** Move to fresh air
- **EYE CONTACT:** Not applicable
- **SKIN CONTACT:** Not applicable
- **INGESTION:** Not applicable

5. Fire Fighting Measures

- **AFTER SPILLAGE/LEAKAGE/GAS LEAKAGE:**
Keep away from all of ignition sources. Ensure adequate ventilation. Use personal protective equipment. Soak up with inert absorbent material. Clean with detergents. Avoid solvents.
- **EXTINGUISHING MEDIA:**
Dry powder, foam, carbon dioxide, water spray

6. Accidental Release Measures

Review **FIRE FIGHTING MEASURES** and **HANDLING AND STORAGE** sections before proceeding with clean-up. Use appropriate personal protective equipment during clean-up.

7. Handling and Storage

- **HANDLING:** Staron[®] Tempest sheet should be unloaded with a forklift or other lifting device capable of handling pallets safely. If a lifting device is not available, always carry single sheet in the vertical position, and wear heavy-duty protective gloves and proper safety shoes. Carrying should be done by two people facing each other on short sides with one hand under to support and the other hand on top to control the sheet.
- **STORAGE:** Keep capable of handling sheet flat and evenly supported at temperatures between 15° ~ 23°C (59° ~ 73°F), in a dry and well-ventilated indoor area.

8. Exposure Controls/Personal Protection

- **TECHNICAL PROTECTIVE MEASURES:**
Provide for appropriate exhaust ventilation and dust collection at machinery.
- **PERSONAL PROTECTIVE EQUIPMENT:**
RESPIRATION (DURING MACHINING OPERATION): In case of insufficient ventilation, wear appropriate respiratory equipment in compliance with local regulations.

EYES (DURING MACHINING OPERATION): Use tightly fitting safety goggles or face-shield.

HANDS (DURING MACHINING PERATION): Wear protective gloves.

OTHERS (DURING MACHINING OPERATION): Use ear protection, safety shoes. Those who are highly sensitivity should take precautions due to possible eye, nose or throat irritation from Staron[®] Tempest dust and fumes.



9. Physical and Chemical Properties

- **FORM:** Solid Sheet
- **COLOR:** Various
- **ODORN:** None
- **BOILING POINT:** Not Applicable
- **MELTING POINT:** Not Applicable
- **SPECIFIC GRAVITY (WATER = 1):** 1.6 ~ 1.8
- **VAPOR PRESSURE (mmHg):** Not Applicable
- **VAPOR DENSITY (Air = 1):** Not Applicable
- **SOLUBILITY IN WATER:** Insoluble
- **pH:** Not Applicable
- **FLASH POINT:** Not Applicable
- **IGNITION TEMPERATURE:** Not Applicable
- **EXPLOSION LIMITS:** Lower = Not Applicable
Upper = Not Applicable

10. Stability and Reactivity

- **THERMAL DECOMPOSITION PRODUCT:**
Frictional heat generated from sawing and routing Staron[®] Tempest sheet can reach or exceed a temperature of 300°C. This is high enough to release a small amount of methyl methacrylate vapor.
- **HAZARDOUS DECOMPOSITION PRODUCT:**
Carbon monoxide, methyl methacrylate monomer, smoke
- **HAZARDOUS REACTION:** None
- **FURTHER INFORMATION:**
Sprayed mist may be flammable at temperature below the flash point.

11. Toxicological Information

- **METHYL METHACRYLATE**
TLV-TWA = 100 ppm = 410 mg/m³; ACGIH (1991-2)
LD50/oral/rat = 7872 mg/kg; RTECS, 47796

Methyl methacrylate can be present on the cutting tool face at a concentration exceeding the TLV of 100 ppm. However, it dissipates to very low levels with good ventilation.



tempest

TECHNICAL INFORMATION

12. Ecological Information

Staron[®] Tempest is manufactured by Cheil Industries in accordance with ISO-14001 standards.

13. Disposal Considerations

Can be landfilled or incinerated, when in compliance with local regulations.

14. Transport Information

Not classified as dangerous in the meaning of transport regulations.

15. Regulatory Information

- **U.S. FEDERAL REGULATIONS**

TSCA Inventory Status: In compliance with TSCA Inventory requirements for commercial purposes.

16. Other Information

- **ADDITIONAL INFORMATION**

Do not use in medical applications involving permanent implantation in the human body.

We hereby certify that the above statements are accurate.

Signature/Issued Date:

Staron[®] Tempest
CHEIL INDUSTRIES INC.