

# SAFETY DATA SHEET



## Nafion™ N2050WX

|                |                              |   |   |
|----------------|------------------------------|---|---|
| Version<br>4.4 | Revision Date:<br>2024/10/17 | SDS Number (Internal):<br>1964938-00016 | Date of last issue: 2024/05/31<br>Date of first issue: 2017/09/21 |
|----------------|------------------------------|---|---|

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### 1. PRODUCT AND COMPANY IDENTIFICATION

Product name : Nafion™ N2050WX

SDS-Identcode : 130000144009

#### Recommended use of the chemical and restrictions on use

Recommended use : sheets and shaped articles  
Electrical industry and electronics film

Restrictions on use : For industrial use only.  
Do not use or resell Chemours™ materials in medical applications involving implantation in the human body or contact with internal body fluids or tissues unless agreed to by Seller in a written agreement covering such use. For further information, please contact your Chemours representative.

#### Manufacturer or supplier's details

Company : Chemours Korea Inc.

Address : 12FL, Majestarcity Tower 1, 12, Seocho-daero 38-gil, Seocho-gu, Seoul 06655, Korea

Telephone : 82-2-2015-5000

Emergency telephone number : 080-880-0454

Telefax : 82-2-2015-5091

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### 2. HAZARDS IDENTIFICATION

#### GHS Classification

This material is not classified as hazardous under the Article 104 of the Occupational Safety and Health Act (OSHA). It is not regulated for the MSDS creation and labeling by the provision of Article 110 Paragraph 1 of the OSHA.

#### GHS label elements

This material is not classified as hazardous under the Article 104 of the Occupational Safety and Health Act (OSHA). It is not regulated for the MSDS creation and labeling by the provision of Article 110 Paragraph 1 of the OSHA.

Hazard pictograms : Not applicable

Signal word : Not applicable

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Hazard statements : Not applicable

Precautionary statements : **Prevention:**  
P264 Wash skin thoroughly after handling.  
**Disposal:**  
P501 Dispose of contents/ container according to waste-related laws

### Other hazards which do not result in classification

No data available

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### 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Mixture

No hazardous ingredients

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### 4. FIRST AID MEASURES

In case of eye contact : Not applicable

In case of skin contact : Not applicable

If inhaled : Not applicable

If swallowed : Not applicable

Most important symptoms and effects, both acute and delayed : Polymer fume fever  
Local irritation  
Symptoms may be delayed.

Protection of first-aiders : No special precautions are necessary for first aid responders.

Notes to physician : Treat symptomatically and supportively.

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### 5. FIREFIGHTING MEASURES

#### Suitable and unsuitable extinguishing media

Suitable extinguishing media : Water spray  
Alcohol-resistant foam  
Carbon dioxide (CO<sub>2</sub>)  
Dry chemical

Unsuitable extinguishing media : None known.

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- Specific hazards during fire-fighting : Exposure to combustion products may be a hazard to health.
- Hazardous combustion products : No hazardous combustion products are known
- Specific extinguishing methods : Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.  
Use water spray to cool unopened containers.  
Remove undamaged containers from fire area if it is safe to do so.  
Evacuate area.
- Special protective equipment for firefighters : Wear self-contained breathing apparatus for firefighting if necessary.  
Use personal protective equipment.

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### 6. ACCIDENTAL RELEASE MEASURES

- Personal precautions, protective equipment and emergency procedures : Not applicable
- Environmental precautions : No special environmental precautions required.
- Methods and materials for containment and cleaning up : Not applicable

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### 7. HANDLING AND STORAGE

- Technical measures : Not applicable
- Local/Total ventilation : Not applicable
- Advice on safe handling : Not applicable
- Conditions for safe storage : Store in accordance with the particular national regulations.  
Ensure proper labeling
- Materials to avoid : No special restrictions on storage with other products.
- Recommended storage temperature : 2 - 50 °C

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Further information on storage stability : Stable under recommended storage conditions.

### 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

#### Components with workplace control parameters

Contains no substances with occupational exposure limit values.

**Engineering measures** : Not applicable

#### Personal protective equipment. Among the following personal protective equipment, the PPEs which require safety certification need to be certified by KOSHA.

Respiratory protection : No personal respiratory protective equipment normally required.

Eye protection : Not applicable

Hand protection

Material : Not applicable

Remarks : Wash hands before breaks and at the end of workday.

Skin and body protection : Not applicable

Hygiene measures : When using do not eat, drink or smoke.

### 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance : sheets, Membrane

Colour : natural colour

Odour : odourless

Odour Threshold : No data available

pH : No data available

Melting point/freezing point : Decomposes before melting.

Initial boiling point and boiling range : No data available

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|  |   |  |
|--|---|--|
| Flash point                                      | : | Not applicable   |
| Evaporation rate                                 | : | Not applicable   |
| Flammability (solid, gas)                        | : | No data available  |
| Upper explosion limit / Upper flammability limit | : | No data available  |
| Lower explosion limit / Lower flammability limit | : | No data available  |
| Vapour pressure                                  | : | Not applicable   |
| Solubility(ies)<br>Water solubility              | : | insoluble  |
| Relative vapour density                          | : | Not applicable   |
| Relative density                                 | : | No data available  |
| Partition coefficient: n-octanol/water           | : | Not applicable   |
| Auto-ignition temperature                        | : | No data available  |
| Decomposition temperature                        | : | 150 °C   |
| Viscosity<br>Viscosity, kinematic                | : | Not applicable   |
| Explosive properties                             | : | Not explosive  |
| Oxidizing properties                             | : | The substance or mixture is not classified as oxidizing. |
| Molecular weight                                 | : | No data available  |
| Particle characteristics<br>Particle size        | : | No data available  |

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### 10. STABILITY AND REACTIVITY

|   |   |   |
|---|---|---|
| Chemical stability and possibility of hazardous reactions | : | Reactivity:<br>Not classified as a reactivity hazard.<br>Chemical stability:<br>Stable under normal conditions.<br>Possibility of hazardous reactions:<br>None known. |
|---|---|---|

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|                                  |   |  |
|----------------------------------|---|--|
| Conditions to avoid              | : | None known.                                    |
| Incompatible materials           | : | None.  |
| Hazardous decomposition products | : | No hazardous decomposition products are known. |

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### 11. TOXICOLOGICAL INFORMATION

|  |   |  |
|--|---|--|
| Information on likely routes of exposure | : | Skin contact<br>Ingestion<br>Eye contact |
|--|---|--|

#### Health hazard information

##### Acute toxicity

No data available

##### Skin corrosion/irritation

No data available

##### Serious eye damage/eye irritation

No data available

##### Respiratory or skin sensitisation

##### Respiratory sensitisation

No data available

##### Skin sensitisation

No data available

##### Carcinogenicity

No data available

##### Germ cell mutagenicity

No data available

##### Reproductive toxicity

No data available

##### STOT - single exposure

No data available

##### STOT - repeated exposure

No data available

##### Repeated dose toxicity

No data available

##### Aspiration toxicity

No data available

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### Experience with human exposure

No data available

### Toxicology, Metabolism, Distribution

No data available

### Neurological effects

No data available

### Further information

No data available

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## 12. ECOLOGICAL INFORMATION

### Ecotoxicity

No data available

### Persistence and degradability

No data available

### Bioaccumulative potential

No data available

### Mobility in soil

No data available

### Other adverse effects

No data available

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## 13. DISPOSAL CONSIDERATIONS

### Disposal methods

Waste from residues : Dispose of contents and container according to wastes control act.

Do not dispose of waste into sewer.

Contaminated packaging : Empty containers should be taken to an approved waste handling site for recycling or disposal.  
If not otherwise specified: Dispose of as unused product.

### Disposal precautions

Dispose of contents and container according to wastes control act.

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## 14. TRANSPORT INFORMATION

### International Regulations

#### UNRTDG

UN number : Not applicable

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Proper shipping name : Not applicable  
Class : Not applicable  
Subsidiary risk : Not applicable  
Packing group : Not applicable  
Labels : Not applicable  
Environmentally hazardous : no

### IATA-DGR

UN/ID No. : Not applicable  
Proper shipping name : Not applicable  
Class : Not applicable  
Subsidiary risk : Not applicable  
Packing group : Not applicable  
Labels : Not applicable  
Packing instruction (cargo aircraft) : Not applicable  
Packing instruction (passenger aircraft) : Not applicable

### IMDG-Code

UN number : Not applicable  
Proper shipping name : Not applicable  
Class : Not applicable  
Subsidiary risk : Not applicable  
Packing group : Not applicable  
Labels : Not applicable  
EmS Code : Not applicable  
Marine pollutant : no

### Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable for product as supplied.

### National Regulations

Refer to section 15 for specific national regulation.

### Special precautions for user

Not applicable

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## 15. REGULATORY INFORMATION

### National regulatory information

#### Regulation under the Occupational Safety and Health Act

#### Harmful Substances Prohibited from Manufacturing

Not applicable

#### Harmful Substances Required Permission for Manufacture

Not applicable

#### Harmful Agents to be kept below Occupational Exposure Limits

Not applicable



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### Harmful Agents Required to be kept below Permission Levels

Not applicable

### Hazardous substances requiring management

Not applicable

### Special Management Materials

Not applicable

### Controlled Substances Subject to Environment Monitoring

Not applicable

### Controlled Substances Subject to Health Examination

Not applicable

### Hazardous Substances Subject to Process Safety Management (PSM) Reporting Obligation

Not applicable

### K-OSHA Hazardous Substances (Occupational Safety and Health Regulations, Table 1)

Not applicable

### K-OSHA Hazardous Substances (Occupational Safety and Health Regulations, Table 9)

Not applicable

### Regulation under the Chemicals Control Act

#### Toxic Chemicals

Not applicable

#### Restricted Chemicals

Not applicable

#### Prohibited Chemicals

Not applicable

#### Toxic Release Inventory

Not applicable

#### Accident Precaution Chemicals

Not applicable

#### Dangerous Substances Safety Management Act

Not Applicable to Dangerous Materials

#### Wastes Control Act

Industrial general wastes

Follow article 13 of the act to dispose the product waste

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## 16. OTHER INFORMATION

Other information : Nafion™ and any associated logos are trademarks or copyrights of The Chemours Company FC, LLC.

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Before use read Chemours safety information.  
For further information contact the local Chemours office or nominated distributors.

### Further information

Sources of key data used to compile the Safety Data Sheet : Internal technical data, data from raw material SDSs, OECD eChem Portal search results and European Chemicals Agency, <http://echa.europa.eu/>

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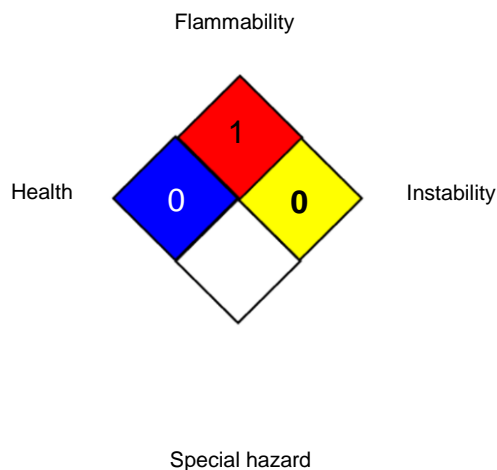
### Revision number and date

Number of Revision : 15

Revision Date : 2024/10/17

Date format : yyyy/mm/dd

### NFPA:



### Full text of other abbreviations

AIIC - Australian Inventory of Industrial Chemicals; ANTT - National Agency for Transport by Land of Brazil; ASTM - American Society for the Testing of Materials; bw - Body weight; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DSL - Domestic Substances List (Canada); ECx - Concentration associated with x% response; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with

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x% growth rate response; ERG - Emergency Response Guide; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organisation for Standardization; KECI - Korea Existing Chemicals Inventory; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; n.o.s. - Not Otherwise Specified; Nch - Chilean Norm; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NOM - Official Mexican Norm; NTP - National Toxicology Program; NZIoC - New Zealand Inventory of Chemicals; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; SADT - Self-Accelerating Decomposition Temperature; SDS - Safety Data Sheet; TCSI - Taiwan Chemical Substance Inventory; TDG - Transportation of Dangerous Goods; TECI - Thailand Existing Chemicals Inventory; TSCA - Toxic Substances Control Act (United States); UN - United Nations; UNRTDG - United Nations Recommendations on the Transport of Dangerous Goods; vPvB - Very Persistent and Very Bioaccumulative; WHMIS - Workplace Hazardous Materials Information System

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