

# SAFETY DATA SHEET



## DryFilm RA/IPA

Version	Revision Date:	SDS Number:	Date of last issue: 2023/11/01
12.1	2024/01/03	1328678-00048	Date of first issue: 2017/02/27

---

### 1. PRODUCT AND COMPANY IDENTIFICATION

Chemical product name : DryFilm RA/IPA

SDS-Identcode : 130000001461

#### Supplier's company name, address and phone number

Company name of supplier : Chemours Kabushiki Kaisha

Address : Kamiyacho Prime Place, 4-1-17, Toranomom, Minato-ku, Tokyo, Japan

Telephone : 050-3823-0500

Emergency telephone number : 0120 081167

Prepared by : Product Stewardship & Regulatory

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

Recommended use : Dry lubricant

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.

---

### 2. HAZARDS IDENTIFICATION

#### GHS classification of chemical product

Flammable liquids : Category 2

Serious eye damage/eye irritation : Category 2A

Specific target organ toxicity - single exposure : Category 3

#### GHS label elements

# SAFETY DATA SHEET



## DryFilm RA/IPA

Version 12.1	Revision Date: 2024/01/03	SDS Number: 1328678-00048	Date of last issue: 2023/11/01 Date of first issue: 2017/02/27
-----------------	------------------------------	------------------------------	---

---

Hazard pictograms



Signal word

: Danger

Hazard statements

: H225 Highly flammable liquid and vapour.  
H319 Causes serious eye irritation.  
H336 May cause drowsiness or dizziness.

Precautionary statements

: **Prevention:**  
P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.  
P233 Keep container tightly closed.  
P241 Use explosion-proof electrical/ ventilating/ lighting equipment.  
P242 Use non-sparking tools.  
P243 Take action to prevent static discharges.  
P261 Avoid breathing mist or vapours.  
P264 Wash skin thoroughly after handling.  
P271 Use only outdoors or in a well-ventilated area.  
P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.

**Response:**  
P303 + P361 + P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water.  
P304 + P340 + P312 IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER/ doctor if you feel unwell.  
P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
P337 + P313 If eye irritation persists: Get medical advice/ attention.

**Storage:**  
P403 + P235 Store in a well-ventilated place. Keep cool.  
P405 Store locked up.

**Disposal:**  
P501 Dispose of contents/ container to an approved waste disposal plant.

### Additional Labelling

The following percentage of the mixture consists of ingredient(s) with unknown hazards to the aquatic environment: 18 %

### Other hazards which do not result in classification

Important symptoms and out- : The thermal decomposition vapours of fluorinated plastics may

# SAFETY DATA SHEET



## DryFilm RA/PA

Version 12.1	Revision Date: 2024/01/03	SDS Number: 1328678-00048	Date of last issue: 2023/11/01 Date of first issue: 2017/02/27
-----------------	------------------------------	------------------------------	---

lines of the emergency assumed

cause polymer fume fever with flu-like symptoms in humans, especially when smoking contaminated tobacco.  
Vapours may form explosive mixture with air.

### 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Mixture

#### Components

Chemical name	CAS-No.	Concentration (% w/w)	ENCS No.
Propan-2-ol	67-63-0	$\geq 70 - < 80$	2-207
2,2',2''-Nitrilotriethanol	102-71-6	$< 0.1$	2-308, 2-353

### 4. FIRST AID MEASURES

- General advice : In the case of accident or if you feel unwell, seek medical advice immediately.  
When symptoms persist or in all cases of doubt seek medical advice.
- If inhaled : If inhaled, remove to fresh air.  
Get medical attention if symptoms occur.
- In case of skin contact : In case of contact, immediately flush skin with plenty of water.  
Remove contaminated clothing and shoes.  
Get medical attention if symptoms occur.
- In case of eye contact : In case of contact, immediately flush eyes with plenty of water for at least 15 minutes.  
If easy to do, remove contact lens, if worn.  
Get medical attention.
- If swallowed : If swallowed, DO NOT induce vomiting.  
Get medical attention if symptoms occur.  
Rinse mouth thoroughly with water.
- Most important symptoms and effects, both acute and delayed : Inhalation may provoke the following symptoms:  
Polymer fume fever  
Eye contact may provoke the following symptoms  
Irritation  
Causes serious eye irritation.  
May cause drowsiness or dizziness.
- Protection of first-aiders : First Aid responders should pay attention to self-protection, and use the recommended personal protective equipment when the potential for exposure exists (see section 8).
- Notes to physician : Treat symptomatically and supportively.

# SAFETY DATA SHEET



## DryFilm RA/IPA

Version 12.1	Revision Date: 2024/01/03	SDS Number: 1328678-00048	Date of last issue: 2023/11/01 Date of first issue: 2017/02/27
-----------------	------------------------------	------------------------------	---

---

---

### 5. FIREFIGHTING MEASURES

- Suitable extinguishing media : Water spray  
Alcohol-resistant foam  
Carbon dioxide (CO<sub>2</sub>)  
Dry chemical
- Unsuitable extinguishing media : High volume water jet
- Specific hazards during fire-fighting : Do not use a solid water stream as it may scatter and spread fire.  
Flash back possible over considerable distance.  
Vapours may form explosive mixtures with air.  
Exposure to combustion products may be a hazard to health.
- Hazardous combustion products : Carbon oxides  
Hydrogen fluoride  
carbonyl fluoride  
potentially toxic fluorinated compounds  
aerosolized particulates
- 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 : In the event of fire, wear self-contained breathing apparatus.  
Use personal protective equipment.

---

### 6. ACCIDENTAL RELEASE MEASURES

- Personal precautions, protective equipment and emergency procedures : Remove all sources of ignition.  
Ventilate the area.  
Use personal protective equipment.  
Follow safe handling advice (see section 7) and personal protective equipment recommendations (see section 8).
- Environmental precautions : Avoid release to the environment.  
Prevent further leakage or spillage if safe to do so.  
Prevent spreading over a wide area (e.g. by containment or oil barriers).  
Retain and dispose of contaminated wash water.  
Local authorities should be advised if significant spillages cannot be contained.
- Methods and materials for containment and cleaning up : Non-sparking tools should be used.  
Soak up with inert absorbent material.

# SAFETY DATA SHEET



## DryFilm RA/IPA

Version 12.1	Revision Date: 2024/01/03	SDS Number: 1328678-00048	Date of last issue: 2023/11/01 Date of first issue: 2017/02/27
-----------------	------------------------------	------------------------------	---

Suppress (knock down) gases/vapours/mists with a water spray jet.  
For large spills, provide dyking or other appropriate containment to keep material from spreading. If dyked material can be pumped, store recovered material in appropriate container. Clean up remaining materials from spill with suitable absorbent.  
Local or national regulations may apply to releases and disposal of this material, as well as those materials and items employed in the cleanup of releases. You will need to determine which regulations are applicable.  
Sections 13 and 15 of this SDS provide information regarding certain local or national requirements.

### 7. HANDLING AND STORAGE

#### Handling

- |                         |   |   |
|-------------------------|---|---|
| Technical measures      | : | See Engineering measures under EXPOSURE CONTROLS/PERSONAL PROTECTION section.   |
| Local/Total ventilation | : | If sufficient ventilation is unavailable, use with local exhaust ventilation.<br>Use explosion-proof electrical, ventilating and lighting equipment.  |
| Advice on safe handling | : | Avoid breathing mist or vapours.<br>Do not swallow.<br>Do not get in eyes.<br>Avoid prolonged or repeated contact with skin.<br>Wash skin thoroughly after handling.<br>Handle in accordance with good industrial hygiene and safety practice, based on the results of the workplace exposure assessment<br>Non-sparking tools should be used.<br>Keep container tightly closed.<br>Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.<br>Take precautionary measures against static discharges.<br>Take care to prevent spills, waste and minimize release to the environment.<br><br>Do not breathe decomposition products. |
| Avoidance of contact    | : | Oxidizing agents  |
| Hygiene measures        | : | If exposure to chemical is likely during typical use, provide eye flushing systems and safety showers close to the working place.<br>When using do not eat, drink or smoke.<br>Wash contaminated clothing before re-use.  |

# SAFETY DATA SHEET



## DryFilm RA/PA

Version 12.1      Revision Date: 2024/01/03      SDS Number: 1328678-00048      Date of last issue: 2023/11/01  
Date of first issue: 2017/02/27

### Storage

Conditions for safe storage : Keep in properly labelled containers.  
Store locked up.  
Keep tightly closed.  
Keep in a cool, well-ventilated place.  
Store in accordance with the particular national regulations.  
Keep away from heat and sources of ignition.

Materials to avoid : Do not store with the following product types:  
Oxidizing solids  
Oxidizing liquids

Packaging material : Unsuitable material: None known.

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

### Threshold limit value and permissible exposure limits for each component in the work environment

Components	CAS-No.	Value type (Form of exposure)	Control parameters / Reference concentration / Permissible concentration	Basis
Propan-2-ol	67-63-0	ACL	200 ppm	JP OEL ISHL
		OEL-C	400 ppm 980 mg/m3	JP OEL JSOH
		TWA	200 ppm	ACGIH
		STEL	400 ppm	ACGIH
2,2',2''-Nitrilotriethanol	102-71-6	TWA	5 mg/m3	ACGIH

### Occupational exposure limits of decomposition products

Components	CAS-No.	Value type (Form of exposure)	Control parameters / Permissible concentration	Basis
hydrofluoric acid	7664-39-3	ACL	0.5 ppm	JP OEL ISHL
		OEL-C	3 ppm 2.5 mg/m3	JP OEL JSOH
	Further information: Skin absorption			
		TWA	0.5 ppm (Fluorine)	ACGIH
		C	2 ppm (Fluorine)	ACGIH
Carbonyl difluoride	353-50-4	TWA	2 ppm	ACGIH
		STEL	5 ppm	ACGIH
Carbon dioxide	124-38-9	OEL-M	5,000 ppm 9,000 mg/m3	JP OEL JSOH
		TWA	5,000 ppm	ACGIH

# SAFETY DATA SHEET



## DryFilm RA/IPA

Version 12.1      Revision Date: 2024/01/03      SDS Number: 1328678-00048      Date of last issue: 2023/11/01  
Date of first issue: 2017/02/27

		STEL	30,000 ppm	ACGIH
Carbon monoxide	630-08-0	OEL-M	50 ppm 57 mg/m <sup>3</sup>	JP OEL JSOH
	Further information: Group 1: Substances known to cause reproductive toxicity in humans			
		TWA	25 ppm	ACGIH

### Biological occupational exposure limits

Components	CAS-No.	Target substance	Biological specimen	Sampling time	Permissible concentration	Basis
Propan-2-ol	67-63-0	Acetone	Urine	End of shift at end of work-week	40 mg/l	ACGIH BEI

**Engineering measures** : Processing may form hazardous compounds (see section 10).  
Minimize workplace exposure concentrations.  
If sufficient ventilation is unavailable, use with local exhaust ventilation.  
Use explosion-proof electrical, ventilating and lighting equipment.

### Personal protective equipment

**Respiratory protection** : If adequate local exhaust ventilation is not available or exposure assessment demonstrates exposures outside the recommended guidelines, use respiratory protection.

**Filter type** : Combined particulates, acidic gas/vapour and organic vapour type

#### Hand protection

**Material** : Chemical-resistant gloves

**Remarks** : Choose gloves to protect hands against chemicals depending on the concentration and quantity of the hazardous substance and specific to place of work. Breakthrough time is not determined for the product. Change gloves often! For special applications, we recommend clarifying the resistance to chemicals of the aforementioned protective gloves with the glove manufacturer. Take note that the product is flammable, which may impact the selection of hand protection. Wash hands before breaks and at the end of workday.

**Eye protection** : Wear the following personal protective equipment:  
Safety goggles

**Skin and body protection** : Select appropriate protective clothing based on chemical resistance data and an assessment of the local exposure

# SAFETY DATA SHEET



## DryFilm RA/PA

Version 12.1	Revision Date: 2024/01/03	SDS Number: 1328678-00048	Date of last issue: 2023/11/01 Date of first issue: 2017/02/27
-----------------	------------------------------	------------------------------	---

---

potential.

Wear the following personal protective equipment:

If assessment demonstrates that there is a risk of explosive atmospheres or flash fires, use flame retardant antistatic protective clothing.

Skin contact must be avoided by using impervious protective clothing (gloves, aprons, boots, etc).

---

### 9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state	: liquid
Colour	: translucent, white to off-white
Odour	: alcohol-like
Odour Threshold	: No data available
Melting point/freezing point	: -89 °C
Boiling point, initial boiling point and boiling range	: 82 °C
Flammability (solid, gas)	: Not applicable
Flammability (liquids)	: Ignitable (see flash point)
Lower explosion limit and upper explosion limit / flammability limit	
Upper explosion limit / Upper flammability limit	: 12.0 %(V)
Lower explosion limit / Lower flammability limit	: 2.0 %(V)
Flash point	: 12 °C
Decomposition temperature	: 300 °C
pH	: 4 - 7
Evaporation rate	: No data available
Auto-ignition temperature	: 399 °C
Viscosity	
Viscosity, kinematic	: No data available

# SAFETY DATA SHEET



## DryFilm RA/PA

Version 12.1	Revision Date: 2024/01/03	SDS Number: 1328678-00048	Date of last issue: 2023/11/01 Date of first issue: 2017/02/27
-----------------	------------------------------	------------------------------	---

---

Solubility(ies)	
Water solubility	: partly soluble
Partition coefficient: n-octanol/water	: Not applicable
Vapour pressure	: 44 hPa (20 °C)
Density and / or relative density	
Relative density	: 0.96 (22 °C)
Relative vapour density	: 2.07 (Air = 1.0)
Explosive properties	: Not explosive
Oxidizing properties	: The substance or mixture is not classified as oxidizing.
Particle characteristics	
Particle size	: Not applicable

---

### 10. STABILITY AND REACTIVITY

Reactivity	: Not classified as a reactivity hazard.
Chemical stability	: Stable under normal conditions.
Possibility of hazardous reactions	: Highly flammable liquid and vapour. Vapours may form explosive mixture with air. Can react with strong oxidizing agents. Hazardous decomposition products will be formed at elevated temperatures.
Conditions to avoid	: Heat, flames and sparks.
Incompatible materials	: Oxidizing agents

#### Hazardous decomposition products

Thermal decomposition	: hydrofluoric acid Carbonyl difluoride Carbon dioxide Carbon monoxide
-----------------------	---

---

### 11. TOXICOLOGICAL INFORMATION

Information on likely routes of	: Inhalation
---------------------------------	--------------

# SAFETY DATA SHEET



## DryFilm RA/PA

Version 12.1	Revision Date: 2024/01/03	SDS Number: 1328678-00048	Date of last issue: 2023/11/01 Date of first issue: 2017/02/27
-----------------	------------------------------	------------------------------	---

---

exposure	Skin contact Ingestion Eye contact
----------	--

### Acute toxicity

Not classified based on available information.

### Components:

#### Propan-2-ol:

Acute oral toxicity	: LD50 (Rat): > 5,000 mg/kg
Acute inhalation toxicity	: LC50 (Rat): > 25 mg/l Exposure time: 6 h Test atmosphere: vapour
Acute dermal toxicity	: LD50 (Rabbit): > 5,000 mg/kg

#### 2,2',2''-Nitrilotriethanol:

Acute oral toxicity	: LD50 (Rat): 6,400 mg/kg
Acute dermal toxicity	: LD50 (Rabbit): > 2,000 mg/kg

### Skin corrosion/irritation

Not classified based on available information.

### Components:

#### Propan-2-ol:

Species	: Rabbit
Result	: No skin irritation

#### 2,2',2''-Nitrilotriethanol:

Species	: Rabbit
Method	: OECD Test Guideline 404
Result	: No skin irritation

### Serious eye damage/eye irritation

Causes serious eye irritation.

### Components:

#### Propan-2-ol:

Species	: Rabbit
Result	: Irritation to eyes, reversing within 21 days

#### 2,2',2''-Nitrilotriethanol:

Species	: Rabbit
Result	: No eye irritation

## DryFilm RA/IPA

Version	Revision Date:	SDS Number:	Date of last issue: 2023/11/01
12.1	2024/01/03	1328678-00048	Date of first issue: 2017/02/27

---

**Respiratory or skin sensitisation****Skin sensitisation**

Not classified based on available information.

**Respiratory sensitisation**

Not classified based on available information.

**Components:****Propan-2-ol:**

Test Type	:	Buehler Test
Exposure routes	:	Skin contact
Species	:	Guinea pig
Method	:	OECD Test Guideline 406
Result	:	negative

**2,2',2''-Nitrilotriethanol:**

Test Type	:	Maximisation Test
Exposure routes	:	Skin contact
Species	:	Guinea pig
Method	:	OECD Test Guideline 406
Result	:	negative

**Germ cell mutagenicity**

Not classified based on available information.

**Components:****Propan-2-ol:**

Genotoxicity in vitro	:	Test Type: Bacterial reverse mutation assay (AMES) Result: negative
-----------------------	---	--

	:	Test Type: In vitro mammalian cell gene mutation test Result: negative
--	---	---

Genotoxicity in vivo	:	Test Type: Mammalian erythrocyte micronucleus test (in vivo cytogenetic assay) Species: Mouse Application Route: Intraperitoneal injection Result: negative
----------------------	---	--

**2,2',2''-Nitrilotriethanol:**

Genotoxicity in vitro	:	Test Type: Bacterial reverse mutation assay (AMES) Result: negative
-----------------------	---	--

**Carcinogenicity**

Not classified based on available information.

# SAFETY DATA SHEET



## DryFilm RA/IPA

Version	Revision Date:	SDS Number:	Date of last issue: 2023/11/01
12.1	2024/01/03	1328678-00048	Date of first issue: 2017/02/27

---

### Components:

#### **Propan-2-ol:**

Species	: Rat
Application Route	: inhalation (vapour)
Exposure time	: 104 weeks
Method	: OECD Test Guideline 451
Result	: negative

#### **2,2',2''-Nitrilotriethanol:**

Species	: Rat
Application Route	: Skin contact
Exposure time	: 103 weeks
Result	: negative

### **Reproductive toxicity**

Not classified based on available information.

### Components:

#### **Propan-2-ol:**

Effects on fertility	: Test Type: Two-generation reproduction toxicity study Species: Rat Application Route: Ingestion Result: negative
----------------------	---

Effects on foetal development	: Test Type: Embryo-foetal development Species: Rat Application Route: Ingestion Result: negative
-------------------------------	--

#### **2,2',2''-Nitrilotriethanol:**

Effects on fertility	: Test Type: Two-generation reproduction toxicity study Species: Rat Application Route: Ingestion Method: OECD Test Guideline 416 Result: negative
----------------------	--

Effects on foetal development	: Test Type: Reproduction/Developmental toxicity screening test Species: Rat Application Route: Ingestion Method: OECD Test Guideline 421 Result: negative
-------------------------------	--

### **STOT - single exposure**

May cause drowsiness or dizziness.

# SAFETY DATA SHEET



## DryFilm RA/PA

Version	Revision Date:	SDS Number:	Date of last issue: 2023/11/01
12.1	2024/01/03	1328678-00048	Date of first issue: 2017/02/27

---

### Components:

#### **Propan-2-ol:**

Assessment : May cause drowsiness or dizziness.

#### **STOT - repeated exposure**

Not classified based on available information.

### Components:

#### **2,2',2''-Nitrilotriethanol:**

Assessment : No significant health effects observed in animals at concentrations of 200 mg/kg bw or less.  
No significant health effects observed in animals at concentrations of 0.2 mg/l/6h/d or less.

### **Repeated dose toxicity**

### Components:

#### **Propan-2-ol:**

Species : Rat  
NOAEL : 12.5 mg/l  
Application Route : inhalation (vapour)  
Exposure time : 104 Weeks

#### **2,2',2''-Nitrilotriethanol:**

Species : Rat  
NOAEL :  $\geq 1,000$  mg/kg  
Application Route : Ingestion  
Exposure time : 90 Days

Species : Rat  
NOAEL :  $\geq 0.5$  mg/l  
Application Route : inhalation (dust/mist/fume)  
Exposure time : 28 Days  
Method : OECD Test Guideline 412

Species : Rat  
NOAEL : 125 mg/kg  
Application Route : Skin contact  
Exposure time : 90 Days

### **Aspiration toxicity**

Not classified based on available information.

# SAFETY DATA SHEET



## DryFilm RA/IPA

Version 12.1	Revision Date: 2024/01/03	SDS Number: 1328678-00048	Date of last issue: 2023/11/01 Date of first issue: 2017/02/27
-----------------	------------------------------	------------------------------	---

### 12. ECOLOGICAL INFORMATION

#### Ecotoxicity

##### Components:

##### **Propan-2-ol:**

Toxicity to fish	:	LC50 (Pimephales promelas (fathead minnow)): 9,640 mg/l Exposure time: 96 h
Toxicity to daphnia and other aquatic invertebrates	:	EC50 (Daphnia magna (Water flea)): > 10,000 mg/l Exposure time: 24 h
Toxicity to microorganisms	:	EC50 (Pseudomonas putida): > 1,050 mg/l Exposure time: 16 h

##### **2,2',2''-Nitrilotriethanol:**

Toxicity to fish	:	LC50 (Pimephales promelas (fathead minnow)): 11,800 mg/l Exposure time: 96 h
Toxicity to daphnia and other aquatic invertebrates	:	EC50 (Ceriodaphnia dubia (water flea)): 609.88 mg/l Exposure time: 48 h
Toxicity to algae/aquatic plants	:	ErC50 (Desmodesmus subspicatus (green algae)): 512 mg/l Exposure time: 72 h Test substance: Neutralised product  EC10 (Desmodesmus subspicatus (green algae)): 26 mg/l Exposure time: 72 h Test substance: Neutralised product
Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity)	:	NOEC (Daphnia magna (Water flea)): 16 mg/l Exposure time: 21 d
Toxicity to microorganisms	:	IC50: > 1,000 mg/l Exposure time: 3 h Method: OECD Test Guideline 209

#### Persistence and degradability

##### Components:

##### **Propan-2-ol:**

Biodegradability	:	Result: rapidly degradable
BOD/COD	:	BOD: 1.19 (BOD5)COD: 2.23BOD/COD: 53 %

##### **2,2',2''-Nitrilotriethanol:**

Biodegradability	:	Result: Readily biodegradable.
------------------	---	--------------------------------

# SAFETY DATA SHEET



## DryFilm RA/PA

Version 12.1	Revision Date: 2024/01/03	SDS Number: 1328678-00048	Date of last issue: 2023/11/01 Date of first issue: 2017/02/27
-----------------	------------------------------	------------------------------	---

---

Biodegradation: 96 %  
Exposure time: 19 d

### Bioaccumulative potential

#### Components:

##### **Propan-2-ol:**

Partition coefficient: n-octanol/water : log Pow: 0.05

##### **2,2',2''-Nitrilotriethanol:**

Bioaccumulation : Species: Cyprinus carpio (Carp)  
Bioconcentration factor (BCF): < 3.9

Partition coefficient: n-octanol/water : log Pow: -1.9

### **Mobility in soil**

No data available

### **Hazardous to the ozone layer**

Not applicable

### **Other adverse effects**

No data available

---

## 13. DISPOSAL CONSIDERATIONS

### **Disposal methods**

Waste from residues : Dispose of in accordance with local regulations.  
Do not dispose of waste into sewer.

Contaminated packaging : Empty containers should be taken to an approved waste handling site for recycling or disposal.  
Empty containers retain residue and can be dangerous.  
Do not pressurize, cut, weld, braze, solder, drill, grind, or expose such containers to heat, flame, sparks, or other sources of ignition. They may explode and cause injury and/or death.  
If not otherwise specified: Dispose of as unused product.

---

## 14. TRANSPORT INFORMATION

### **International Regulations**

#### **UNRTDG**

UN number : UN 1219  
Proper shipping name : ISOPROPANOL SOLUTION  
Class : 3

# SAFETY DATA SHEET



## DryFilm RA/PA

Version	Revision Date:	SDS Number:	Date of last issue: 2023/11/01
12.1	2024/01/03	1328678-00048	Date of first issue: 2017/02/27

Packing group : II  
Labels : 3  
Environmentally hazardous : no

### IATA-DGR

UN/ID No. : UN 1219  
Proper shipping name : Isopropanol solution  
Class : 3  
Packing group : II  
Labels : Flammable Liquids  
Packing instruction (cargo aircraft) : 364  
Packing instruction (passenger aircraft) : 353

### IMDG-Code

UN number : UN 1219  
Proper shipping name : ISOPROPANOL SOLUTION  
  
Class : 3  
Packing group : II  
Labels : 3  
EmS Code : F-E, S-D  
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

The transport classification(s) provided herein are for informational purposes only, and solely based upon the properties of the unpackaged material as it is described within this Safety Data Sheet. Transportation classifications may vary by mode of transportation, package sizes, and variations in regional or country regulations.

ERG Code : 129

## 15. REGULATORY INFORMATION

### Related Regulations

#### Fire Service Law

Group 4, Type 1 petroleum, Water soluble liquid, (400 litre), Hazardous rank II

#### Chemical Substance Control Law

Priority Assessment Chemical Substance

Chemical name	Number
Isopropyl alcohol	102
Triethanolamine	108

# SAFETY DATA SHEET



## DryFilm RA/PA

Version 12.1	Revision Date: 2024/01/03	SDS Number: 1328678-00048	Date of last issue: 2023/11/01 Date of first issue: 2017/02/27
-----------------	------------------------------	------------------------------	---

### Industrial Safety and Health Law

#### Harmful Substances Prohibited from Manufacture

Not applicable

#### Harmful Substances Required Permission for Manufacture

Not applicable

#### Substances Prevented From Impairment of Health

Not applicable

#### Circular concerning Information on Chemicals having Mutagenicity - Annex 2: Information on Existing Chemicals having Mutagenicity

Not applicable

#### Circular concerning Information on Chemicals having Mutagenicity - Annex 1: Information on Notified Substances having Mutagenicity

Not applicable

#### Substances Subject to be Notified Names

Article 57-2 (Enforcement Order Table 9)

Chemical name	Concentration (%)	Remarks
Propyl alcohol	$\geq 70$ - $< 80$	-

#### Substances Subject to be Indicated Names

Article 57 (Enforcement Order Article 18)

Chemical name	Remarks
Propyl alcohol	-

#### Carcinogenic Substances (Article 57-2 of the Occupational Health and Safety Regulations)

Not applicable

#### Ordinance on Prevention of Hazards Due to Specified Chemical Substances

Not applicable

#### Ordinance on Prevention of Lead Poisoning

Not applicable

#### Ordinance on Prevention of Tetraalkyl Lead Poisoning

Not applicable

#### Ordinance on Prevention of Organic Solvent Poisoning

Organic Solvents Class 2

#### Enforcement Order of the Industrial Safety and Health Law - Attached table 1 (Dangerous Substances)

Inflammable Substance

#### Poisonous and Deleterious Substances Control Law

Not applicable

#### Act on Confirmation, etc. of Release Amounts of Specific Chemical Substances in the Environment and Promotion of Improvements to the Management Thereof

Not applicable

# SAFETY DATA SHEET



## DryFilm RA/PA

Version 12.1	Revision Date: 2024/01/03	SDS Number: 1328678-00048	Date of last issue: 2023/11/01 Date of first issue: 2017/02/27
-----------------	------------------------------	------------------------------	---

---

### High Pressure Gas Safety Act

Not applicable

### Explosive Control Law

Not applicable

### Vessel Safety Law

Flammable liquids (Article 2 and 3 of rules on shipping and storage of dangerous goods and its Attached Table 1)

### Aviation Law

Flammable liquid (Article 194 of The Enforcement Rules of Aviation Law and its Attached Table 1)

### Marine Pollution and Sea Disaster Prevention etc Law

Bulk transportation : Noxious liquid substance(Category Z)

Pack transportation : Not classified as marine pollutant

### Narcotics and Psychotropics Control Act

Narcotic or Psychotropic Raw Material (Export / Import Permission)

Not applicable

Specific Narcotic or Psychotropic Raw Material (Export / Import permission)

Not applicable

### Waste Disposal and Public Cleansing Law

Specially Controlled Industrial Waste

---

## 16. OTHER INFORMATION

Other information : Chemours™ and the Chemours Logo are trademarks of The Chemours Company.  
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/>

Date format : yyyy/mm/dd

### Full text of other abbreviations

ACGIH	: USA. ACGIH Threshold Limit Values (TLV)
ACGIH BEI	: ACGIH - Biological Exposure Indices (BEI)
JP OEL ISHL	: Japan. Administrative Control Levels
JP OEL JSOH	: Japan. The Japan Society for Occupational Health. Recommendation of Occupational Exposure Limits

# SAFETY DATA SHEET



## DryFilm RA/PA

Version 12.1	Revision Date: 2024/01/03	SDS Number: 1328678-00048	Date of last issue: 2023/11/01 Date of first issue: 2017/02/27
-----------------	------------------------------	------------------------------	---

ACGIH / TWA	: 8-hour, time-weighted average
ACGIH / STEL	: Short-term exposure limit
ACGIH / C	: Ceiling limit
JP OEL ISHL / ACL	: Administrative Control level
JP OEL JSOH / OEL-M	: Occupational Exposure Limit-Mean
JP OEL JSOH / OEL-C	: Occupational Exposure Limit-Ceiling

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 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

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 is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and shall not be considered a warranty or quality specification of any type. The information provided relates only to the specific material identified at the top of this SDS and may not be valid when the SDS material is used in combination with any other materials or in any process, unless specified in the text. Material users should review the information and recommendations in the specific context of their intended manner of handling, use, processing and storage, including an assessment of the appropriateness of the SDS material in the user's end product, if applicable.

JP / EN