

DryFilm RA/IPA

Version 2.0

Revision Date 04/30/2015

Ref. 130000001461

This SDS adheres to the standards and regulatory requirements of the United States and may not meet the regulatory requirements in other countries.

SECTION 1. PRODUCT AND COMPANY IDENTIFICATION

Product name	:	DryFilm RA/IPA
Product Use	:	Dry lubricant, For industrial use only.
Restrictions on use	:	Do not use product for anything outside of the above specified uses
Manufacturer/Supplier	:	DuPont 1007 Market Street Wilmington, DE 19898 United States of America
Product Information	:	1-800-441-7515 (outside the U.S. 1-302-774-1000)
Medical Emergency	:	1-800-441-3637 (outside the U.S. 1-302-774-1139)
Transport Emergency	:	CHEMTREC: +1-800-424-9300 (outside the U.S. +1-703-527-3887)
Other information	:	professional use

SECTION 2. HAZARDS IDENTIFICATION

Product hazard category

Flammable liquids	Category 2
Serious eye damage/eye irritation	Category 2A
Specific target organ toxicity - single exposure	Category 3

Label content

Pictogram :





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Signal word : Danger

Hazardous warnings : Highly flammable liquid and vapour.
Causes serious eye irritation.
May cause respiratory irritation.
May cause drowsiness or dizziness.

Hazardous prevention measures : Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
Keep container tightly closed.
Ground/bond container and receiving equipment.
Use explosion-proof electrical/ ventilating/ lighting/ equipment.
Use only non-sparking tools.
Take precautionary measures against static discharge.
Avoid breathing dust/ fume/ gas/ mist/ vapours/ spray.
Wash skin thoroughly after handling.
Use only outdoors or in a well-ventilated area.
Wear protective gloves/ eye protection/ face protection.
IF ON SKIN (or hair): Remove/ Take off immediately all contaminated clothing.
Rinse skin with water/ shower.
IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
Call a POISON CENTER or doctor/ physician if you feel unwell.
If eye irritation persists: Get medical advice/ attention.
In case of fire: Use dry sand, dry chemical or alcohol-resistant foam for extinction.
Store in a well-ventilated place. Keep container tightly closed.
Store in a well-ventilated place. Keep cool.
Store locked up.
Dispose of contents/ container to an approved waste disposal plant.

Other hazards

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The thermal decomposition vapours of fluorinated polymers may cause polymer fume fever with flu-like symptoms in humans, especially when smoking contaminated tobacco., Repeated episodes of polymer fume fever may result in persistent lung effects., Dust may cause:, Respiratory tract irritation, Difficulty in breathing, Shortness of breath

The following percentage of the mixture consists of ingredient(s) with unknown acute toxicity: 18 %

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Component	CAS-No.	Concentration
Propan-2-ol	67-63-0	70 - 80 %

The specific chemical identity and/or exact percentage (concentration) of composition has been withheld as a trade secret.

SECTION 4. FIRST AID MEASURES

- General advice : When symptoms persist or in all cases of doubt seek medical advice.
- Inhalation : Move to fresh air. Oxygen or artificial respiration if needed. Consult a physician.
- Skin contact : In case of contact, immediately flush skin with plenty of water. Remove contaminated clothing and shoes. Wash contaminated clothing before re-use. Consult a physician if necessary.
- Eye contact : Immediately flush eye(s) with plenty of water. Remove contact lenses. Seek medical advice.
- Ingestion : DO NOT induce vomiting unless directed to do so by a physician or poison control center. Never give anything by mouth to an unconscious person. Call a physician.



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Most important symptoms/effects, acute and delayed : No applicable data available.
 Protection of first-aiders : No applicable data available.
 Notes to physician : No applicable data available.

SECTION 5. FIREFIGHTING MEASURES

Suitable extinguishing media : Dry chemical, Alcohol-resistant foam, Water spray, Carbon dioxide (CO2)
 Unsuitable extinguishing media : No applicable data available.
 Specific hazards : Flammable liquid Vapours may form explosive mixtures with air. Vapours are heavier than air and may spread along floors. Flash back possible over considerable distance. In fire conditions, toxic decomposition products may be formed. (see also section 10)
 Special protective equipment for firefighters : Wear self-contained breathing apparatus and protective suit.
 Further information : Evacuate personnel to safe areas. In the event of fire, cool tanks with water spray.

SECTION 6. ACCIDENTAL RELEASE MEASURES

NOTE: Review FIRE FIGHTING MEASURES and HANDLING (PERSONNEL) sections before proceeding with clean-up. Use appropriate PERSONAL PROTECTIVE EQUIPMENT during clean-up.

Safeguards (Personnel) : Ventilate spill area. Wear self-contained breathing apparatus and protective suit. Remove all sources of ignition.
 Environmental precautions : Prevent material from entering sewers, waterways, or low areas.
 Spill Cleanup : Dike spill. Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust).
 Accidental Release Measures : No applicable data available.

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SECTION 7. HANDLING AND STORAGE

- Handling (Personnel) : Do not breathe vapours or spray mist. Avoid contact with skin, eyes and clothing. Wash hands thoroughly after handling. Remove and wash contaminated clothing before re-use. Do not store or consume food, drink or tobacco in areas where they may become contaminated with this material.
- Handling (Physical Aspects) : Keep away from heat and sources of ignition. Take necessary action to avoid static electricity discharge (which might cause ignition of organic vapours).
- Dust explosion class : No applicable data available.
- Storage : Keep containers tightly closed in a dry, cool and well-ventilated place.
- Storage period : No applicable data available.
- Storage temperature : No applicable data available.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

- Engineering controls : Use only with adequate ventilation.
- Personal protective equipment
- Respiratory protection : Provide adequate ventilation. When workers are facing concentrations above the exposure limit they must use appropriate certified respirators.
- Hand protection : Material: Impervious gloves
- Eye protection : Wear coverall chemical splash goggles.
- Skin and body protection : Preventive skin protection
Where there is potential for skin contact, have available and wear as appropriate, impervious gloves, apron, pants, jacket, hood and boots.
- Exposure Guidelines
- Exposure Limit Values

Propan-2-ol				
Permissible exposure limit:	(OSHA)	400 ppm	980 mg/m3	8 hr. TWA
TLV	(ACGIH)	200 ppm	TWA	

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TLV	(ACGIH)	400 ppm	STEL	
AEL *	(DUPONT)	200 ppm	8 & 12 hr. TWA	
	(BIH F MAC)	400 ppm	980 mg/m3	Maximum allowable concentration:
	(BIH F MAC)	980 mg/m3		Maximum allowable concentration:
	(BIH RS MAC)	400 ppm	980 mg/m3	Maximum allowable concentration:
	(BIH RS MAC)	980 mg/m3		Maximum allowable concentration:

Biological Exposure Indices

Propan-2-ol BEI	(ACGIH)	40 mg/l Acetone/Urine
		Sampling time: End of shift at end of work week.

* AEL is DuPont's Acceptable Exposure Limit. Where governmentally imposed occupational exposure limits which are lower than the AEL are in effect, such limits shall take precedence.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	
Physical state	: liquid
Form	: liquid
Color	: white, translucent
Odor	: alcohol-like, characteristic
Odor threshold	: No applicable data available.
pH	: 4 - 7
Melting point/freezing point	: Melting point/range 295 - 305 °C (563 - 581 °F) Freezing point -89 °C (-128 °F)
Boiling point/boiling range	: Boiling point 82.0 °C (179.6 °F)
Flash point	: 12 °C

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Evaporation rate	: No applicable data available.
Flammability (solid, gas)	: No applicable data available.
Upper explosion limit	: 12.0 vol%
Lower explosion limit	: 2.0 vol%
Vapor pressure	: 33 mm Hg at 20 °C (68 °F)
Vapor density	: 2.07 at 20 °C (68 °F) (Air = 1.0)
Specific gravity (Relative density)	: 0.96 at 22 °C (72 °F)
Water solubility	: partly soluble
Solubility(ies)	: No applicable data available.
Partition coefficient: n-octanol/water	: No applicable data available.
Auto-ignition temperature	: No applicable data available.
Ignition temperature	: 399 °C
Decomposition temperature	: 300 °C
Viscosity, kinematic	: No applicable data available.
Viscosity, dynamic	: No applicable data available.

SECTION 10. STABILITY AND REACTIVITY

Reactivity	: Stable under recommended storage conditions.
Chemical stability	: Stable under normal conditions.
Possibility of hazardous reactions	: Reacts with Aluminum above 49 deg C. Polymerization will not occur.
Conditions to avoid	: Heat, flames and sparks. Decomposes on heating.

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Decomposition temperature 300 °C (572 °F)

Incompatible materials : strong oxidizers Strong acids, reactive metals, Halogenated compounds, Aldehydes, Strong bases, Alkali metals, Alkaline earth metals

Hazardous decomposition products : Carbon oxides, Fluorinated compounds

SECTION 11. TOXICOLOGICAL INFORMATION

Propan-2-ol

- Inhalation 4 h LC50 : 72.6 mg/l , Rat
Target Organs: Central nervous system
Central nervous system depression
- Dermal LD50 : 12,870 mg/kg , Rabbit
- Oral LD50 : 5,840 mg/kg , Rat
- Skin irritation : No skin irritation, Rabbit
- Eye irritation : Eye irritation, Rabbit
- Skin sensitization : Does not cause skin sensitisation., Guinea pig
Does not cause respiratory sensitisation., Mouse
- Repeated dose toxicity : Inhalation
multiple species
-
No toxicologically significant effects were found.
- Carcinogenicity : Not classifiable as a human carcinogen.
Overall weight of evidence indicates that the substance is not carcinogenic.
- Mutagenicity : Animal testing did not show any mutagenic effects.
Tests on bacterial or mammalian cell cultures did not show mutagenic effects.
- Reproductive toxicity : No toxicity to reproduction
Animal testing showed effects on reproduction at levels equal to or above those causing parental toxicity.

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Teratogenicity : Animal testing showed effects on embryo-fetal development at levels equal to or above those causing maternal toxicity.

Carcinogenicity

The carcinogenicity classifications for this product and/or its ingredients have been determined according to HazCom 2012, Appendix A.6. The classifications may differ from those listed in the National Toxicology Program (NTP) Report on Carcinogens (latest edition) or those found to be a potential carcinogen in the International Agency for Research on Cancer (IARC) Monographs (latest edition).

None of the components present in this material at concentrations equal to or greater than 0.1% are listed by IARC, NTP, or OSHA, as a carcinogen.

SECTION 12. ECOLOGICAL INFORMATION**Aquatic Toxicity****Propan-2-ol**

96 h LC50 : Pimephales promelas (fathead minnow) 9,640 mg/l OECD Test Guideline 203

72 h ErC50 : Scenedesmus quadricauda (Green algae) > 1,000 mg/l

24 h EC50 : Daphnia (water flea) > 10,000 mg/l OECD Test Guideline 202

21 d : NOEC Daphnia magna (Water flea) 30 mg/l

Environmental Fate**Propan-2-ol**

Biodegradability : Readily biodegradable

Bioaccumulation : Bioaccumulation is unlikely.

Additional ecological information : No data is available on the product itself.

SECTION 13. DISPOSAL CONSIDERATIONS

Waste disposal methods - Product : Dispose of as hazardous waste in compliance with local and national regulations.

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Contaminated packaging : Dispose of container properly.
If recycling is not practicable, dispose of in compliance with local regulations.

SECTION 14. TRANSPORT INFORMATION

DOT	UN number	: 1219
	Proper shipping name	: Isopropanol solution
	Class	: 3
	Packing group	: II
	Labelling No.	: 3
	Reportable Quantity	: Isopropanol
IATA_C	UN number	: 1219
	Proper shipping name	: Isopropanol solution
	Class	: 3
	Packing group	: II
	Labelling No.	: 3
IMDG	UN number	: 1219
	Proper shipping name	: ISOPROPANOL SOLUTION
	Class	: 3
	Packing group	: II
	Labelling No.	: 3

SECTION 15. REGULATORY INFORMATION

SARA 313 Regulated Chemical(s)	: Isopropyl Alcohol
Title III hazard classification	: Acute Health Hazard: Yes Chronic Health Hazard: Yes Fire: Yes Reactivity/Physical hazard: Yes Pressure: Yes
CERCLA Reportable Quantity	: 134 lbs Based on the percentage composition of this chemical in the product.:



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Propan-2-ol

SECTION 16. OTHER INFORMATION

The DuPont Oval Logo is a registered trademark of E.I. du Pont de Nemours and Company.

Revision Date : 04/30/2015

Contact person : MSDS Coordinator, DuPont Chemicals and Fluoroproducts, Wilmington, DE
19898, (800) 441-7515

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