

Isonel® 51

Version 7

Revision Date 12/15/2015

Print Date 12/15/2015

SECTION 1. IDENTIFICATION

Product name : Isonel® 51

Manufacturer or supplier's details

Company : ELANTAS PDG, INC.
5200 North 2nd Street
St. Louis MO 63147

Telephone : (314) 621-5700
Visit our web site : www.elantas.com
E-mail address : Todd.Thomas@altana.com
Emergency telephone number : INFOTRAC - 1-800-535-5053

Recommended use of the chemical and restrictions on use

Recommended use : Electrical Insulation

Restrictions on use : Refer to Section 15 for any restrictions that may apply

SECTION 2. HAZARDS IDENTIFICATION**GHS Classification**

Flammable liquids : Category 3

Acute toxicity (Inhalation) : Category 4

Skin irritation : Category 2

Eye irritation : Category 2A

Carcinogenicity : Category 2

Reproductive toxicity : Category 2

Specific target organ toxicity - single exposure : Category 3 (Central nervous system)

Specific target organ toxicity - repeated exposure : Category 2 (Kidney, Liver)

GHS Label element

Hazard pictograms :



Signal word : Warning

Hazard statements : H226 Flammable liquid and vapour.

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H315 Causes skin irritation.
H319 Causes serious eye irritation.
H332 Harmful if inhaled.
H336 May cause drowsiness or dizziness.
H351 Suspected of causing cancer.
H361 Suspected of damaging fertility or the unborn child.
H373 May cause damage to organs (Kidney, Liver) through prolonged or repeated exposure.

Precautionary statements

: **Prevention:**

P201 Obtain special instructions before use.
P202 Do not handle until all safety precautions have been read and understood.
P210 Keep away from heat/sparks/open flames/hot surfaces. No smoking.
P233 Keep container tightly closed.
P240 Ground/bond container and receiving equipment.
P241 Use explosion-proof electrical/ ventilating/ lighting/ equipment.
P242 Use only non-sparking tools.
P243 Take precautionary measures against static discharge.
P260 Do not breathe dust/ fume/ gas/ mist/ vapours/ spray.
P264 Wash skin thoroughly after handling.
P271 Use only outdoors or in a well-ventilated area.
P280 Wear protective gloves/ eye protection/ face protection.
P281 Use personal protective equipment as required.

Response:

P303 + P361 + P353 IF ON SKIN (or hair): Remove/ Take off immediately all contaminated clothing. Rinse skin with water/ shower.
P304 + P340 + P312 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER or doctor/ physician 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.
P308 + P313 IF exposed or concerned: Get medical advice/ attention.
P332 + P313 If skin irritation occurs: Get medical advice/ attention.
P337 + P313 If eye irritation persists: Get medical advice/ attention.
P362 Take off contaminated clothing and wash before reuse.
P370 + P378 In case of fire: Use dry sand, dry chemical or alcohol-resistant foam for extinction.

Storage:

P403 + P233 Store in a well-ventilated place. Keep container tightly closed.
P403 + P235 Store in a well-ventilated place. Keep cool.
P405 Store locked up.

Disposal:

P501 Dispose of contents/ container to an approved waste

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disposal plant.

Other hazards

None known.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical nature : Modified Alkyd Resin Solution

Hazardous components

Component	CAS-No.	Concentration (%)
Stoddard Solvent (Mineral spirits)	8052-41-3	>= 22 - < 23
Xylene	1330-20-7	>= 21 - < 22
Ethylbenzene	100-41-4	>= 5 - < 6
4-tert-butylphenol	98-54-4	>= 0 - < 1
Toluene	108-88-3	>= 0 - < 1
Naphthalene	91-20-3	>= 0 - < 1
Cumene	98-82-8	>= 0 - < 1

SECTION 4. FIRST AID MEASURES

- General advice : Move out of dangerous area.
Show this safety data sheet to the doctor in attendance.
Do not leave the victim unattended.
- If inhaled : Consult a physician after significant exposure.
If unconscious place in recovery position and seek medical advice.
- In case of skin contact : If skin irritation persists, call a physician.
If on skin, rinse well with water.
If on clothes, remove clothes.
- In case of eye contact : Immediately flush eye(s) with plenty of water.
Remove contact lenses.
Protect unharmed eye.
Keep eye wide open while rinsing.
If eye irritation persists, consult a specialist.
- If swallowed : Induce vomiting immediately and call a physician.
Keep respiratory tract clear.
Do not give milk or alcoholic beverages.
Never give anything by mouth to an unconscious person.
If symptoms persist, call a physician.

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Take victim immediately to hospital.

SECTION 5. FIREFIGHTING MEASURES

- Suitable extinguishing media : Carbon dioxide (CO₂)
- Unsuitable extinguishing media : High volume water jet
- Specific hazards during firefighting : Do not allow run-off from fire fighting to enter drains or water courses.
- Further information : Collect contaminated fire extinguishing water separately. This must not be discharged into drains. Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations. For safety reasons in case of fire, cans should be stored separately in closed containments. Use a water spray to cool fully closed containers.
- Special protective equipment for firefighters : Wear self-contained breathing apparatus for firefighting if necessary.

SECTION 6. ACCIDENTAL RELEASE MEASURES

- Personal precautions, protective equipment and emergency procedures : Use personal protective equipment. Ensure adequate ventilation.
- Environmental precautions : Prevent product from entering drains. Prevent further leakage or spillage if safe to do so. If the product contaminates rivers and lakes or drains inform respective authorities.
- Methods and materials for containment and cleaning up : Contain spillage, and then collect with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations (see section 13). Keep in suitable, closed containers for disposal. Absorbent paper or other organic material used for cleaning up resin is a fire hazard, as heat and spontaneous combustion can occur, particularly if the resin was catalyzed. Catalyzed resin can generate hazardous exothermic heat if allowed to polymerize in a mass. All soiled or waste materials must be water soaked, and kept in a closed bin until disposed of.
- Contain spillage, and then collect with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to

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local / national regulations (see section 13).
Keep in suitable, closed containers for disposal.

SECTION 7. HANDLING AND STORAGE

- Advice on safe handling : Avoid formation of aerosol.
Do not breathe vapours/dust.
Avoid exposure - obtain special instructions before use.
Avoid contact with skin and eyes.
For personal protection see section 8.
Smoking, eating and drinking should be prohibited in the application area.
Provide sufficient air exchange and/or exhaust in work rooms.
Dispose of rinse water in accordance with local and national regulations.
The chemical reaction that cures mixed epoxy is exothermic (heat generating). If left to cure in a contained mass, such as in a mixing vessel, it can generate enough heat to melt plastic, burn skin or ignite surrounding combustible materials. The larger or thicker the epoxy mass, the more heat generated.
- Avoid formation of aerosol.
Do not breathe vapours/dust.
Avoid exposure - obtain special instructions before use.
Avoid contact with skin and eyes.
For personal protection see section 8.
Smoking, eating and drinking should be prohibited in the application area.
Provide sufficient air exchange and/or exhaust in work rooms.
Dispose of rinse water in accordance with local and national regulations.
- Conditions for safe storage : Store under conditions specified on the product Technical Data Sheet to maintain product quality.
No smoking.
Keep container tightly closed in a dry and well-ventilated place.
Observe label precautions.
Electrical installations / working materials must comply with the technological safety standards.
- No smoking.
Keep container tightly closed in a dry and well-ventilated place.
Observe label precautions.
Electrical installations / working materials must comply with the technological safety standards.

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SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION**Components with workplace control parameters**

Components	CAS-No.	Value type (Form of exposure)	Control parameters / Permissible concentration	Basis
Stoddard Solvent (Mineral spirits)	8052-41-3	TWA	100 ppm	ACGIH
		TWA	500 ppm 2,900 mg/m ³	OSHA Z-1
		TWA	100 ppm 525 mg/m ³	OSHA P0
Xylene	1330-20-7	TWA	100 ppm 435 mg/m ³	OSHA Z-1
		STEL	150 ppm 655 mg/m ³	OSHA P0
		TWA	100 ppm 435 mg/m ³	OSHA P0
		TWA	100 ppm	ACGIH
		STEL	150 ppm	ACGIH
		TWA	100 ppm	ACGIH
Ethylbenzene	100-41-4	TWA	20 ppm	ACGIH
		TWA	100 ppm 435 mg/m ³	OSHA Z-1
		TWA	100 ppm 435 mg/m ³	OSHA P0
		STEL	125 ppm 545 mg/m ³	OSHA P0
Toluene	108-88-3	TWA	20 ppm	ACGIH
		TWA	200 ppm	OSHA Z-2
		CEIL	300 ppm	OSHA Z-2
		Peak	500 ppm	OSHA Z-2
		TWA	100 ppm 375 mg/m ³	OSHA P0
		STEL	150 ppm 560 mg/m ³	OSHA P0
Naphthalene	91-20-3	TWA	10 ppm	ACGIH
		TWA	10 ppm 50 mg/m ³	OSHA Z-1
		TWA	10 ppm 50 mg/m ³	OSHA P0
		STEL	15 ppm 75 mg/m ³	OSHA P0
Cumene	98-82-8	TWA	50 ppm	ACGIH
		TWA	50 ppm 245 mg/m ³	OSHA Z-1
		TWA	50 ppm 245 mg/m ³	OSHA P0

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- Engineering measures** : Use with adequate ventilation.
 All application areas should be ventilated in accordance with applicable OSHA regulations. (29 CFR 1910.94)
 Formaldehyde may be released during the curing process. Formaldehyde is a suspected human carcinogen and a skin and respiratory sensitizer. Prolonged or repeated exposure to vapors may result in respiratory impairment and/or liver, kidney or heart effects.
- Personal protective equipment**
- Respiratory protection : In the case of vapour formation use a respirator with an approved filter.
- Hand protection
 Remarks : The suitability for a specific workplace should be discussed with the producers of the protective gloves.
- Eye protection : Eye wash bottle with pure water
 Tightly fitting safety goggles
 Wear face-shield and protective suit for abnormal processing problems.
- Skin and body protection : Impervious clothing
 Choose body protection according to the amount and concentration of the dangerous substance at the work place.
- Hygiene measures : When using do not eat or drink.
 When using do not smoke.
 Wash hands before breaks and at the end of workday.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

- Appearance : liquid
- Odour Threshold : No data available
- pH : No data available
- Melting point/freezing point : No data available
- Initial boiling point and boiling range : No data available
- Flash point : 90 °F (32 °C)
 Method: ASTM D 93
- Evaporation rate : No data available

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Flammability (solid, gas)	: No data available
Upper explosion limit	: No data available
Lower explosion limit	: No data available
Vapour pressure	: No data available
Relative vapour density	: No data available
Relative Density/Specific Gravity	: No data available
Density	: 0.9622 g/cm ³ (77 °F (25 °C))
Solubility(ies)	
Water solubility	: No data available
Solubility in other solvents	: No data available
Partition coefficient: n-octanol/water	: No data available
Auto-ignition temperature	: No data available
Thermal decomposition	: No data available
Viscosity	
Viscosity, dynamic	: No data available
Viscosity, kinematic	: Greater than 22 mm ² /s (104 °F (40 °C))

SECTION 10. STABILITY AND REACTIVITY

Reactivity	: No decomposition if stored and applied as directed.
Chemical stability	: No decomposition if stored and applied as directed.
Possibility of hazardous reactions	: No decomposition if stored and applied as directed.
	Vapours may form explosive mixture with air.
Conditions to avoid	: Heat, flames and sparks.
Hazardous decomposition products	: Carbon monoxide in a fire. formaldehyde

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SECTION 11. TOXICOLOGICAL INFORMATION**Information on likely routes of exposure**

Inhalation
Skin contact
Skin absorption
Eyes

Acute toxicity**Product:**

Acute oral toxicity : Acute toxicity estimate : > 5,000 mg/kg
Method: Calculation method

Acute inhalation toxicity : Acute toxicity estimate : 18452 ppm
Exposure time: 4 h
Test atmosphere: gas
Method: Calculation method

Acute dermal toxicity : Acute toxicity estimate : > 5,000 mg/kg
Method: Calculation method

Components:**8052-41-3 Stoddard Solvent (Mineral spirits):**

Acute oral toxicity : LD50 (Rat): > 6,000 mg/kg

Acute inhalation toxicity : LC50 (Rat): 5,500 mg/m³
Exposure time: 4 h

Acute dermal toxicity : LD50 (Rabbit): > 3,000 mg/kg

1330-20-7 Xylene:

Acute oral toxicity : LD50 (Rat, male): 3,523 mg/kg
Method: Directive 67/548/EEC, Annex V, B.1.

Acute inhalation toxicity : LC50 (Rat): 5000 ppm
Exposure time: 4 h

Acute dermal toxicity : LD50 (Rabbit): 1,700 mg/kg

100-41-4 Ethylbenzene:

Acute oral toxicity : LD50 (Rat): 3,500 mg/kg

Acute dermal toxicity : LD50 (Rabbit): 5,510 mg/kg

108-88-3 Toluene:

Acute oral toxicity : LD50 (Rat): 2,600 mg/kg

91-20-3 Naphthalene:

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Acute oral toxicity : LD50 (Mouse): 316 mg/kg

Acute inhalation toxicity : LC50 (Rat): > 340 ppm
Exposure time: 1.00 h

Acute dermal toxicity : LD50 (Rat): > 2,500 mg/kg

98-82-8 Cumene:

Acute oral toxicity : LD50 (Rat): 1,400 mg/kg

Acute inhalation toxicity : LC50 : Remarks: No data available

Acute dermal toxicity : LD50 : Remarks: No data available

Skin corrosion/irritation**Product:**

Remarks: May cause skin irritation in susceptible persons.

Components:**8052-41-3 Stoddard Solvent (Mineral spirits):**

Species: Rabbit

Result: Moderate skin irritation

1330-20-7 Xylene:

Species: Rabbit

Result: Moderate skin irritation

100-41-4 Ethylbenzene:

Species: Rabbit

Result: Moderate skin irritation

91-20-3 Naphthalene:

Species: Rabbit

Method: Draize Test

Result: Severe skin irritation

Serious eye damage/eye irritation**Product:**

Remarks: May cause irreversible eye damage.

Components:**8052-41-3 Stoddard Solvent (Mineral spirits):**

Species: Rabbit

Result: Eye irritation

1330-20-7 Xylene:

Species: Rabbit

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Result: Eye irritation

100-41-4 Ethylbenzene:

Species: Rabbit

Result: Moderate eye irritation

91-20-3 Naphthalene:

Species: Rabbit

Result: Mild eye irritation

Method: Draize Test

Respiratory or skin sensitisation**Carcinogenicity**

IARC	Group 2B: Possibly carcinogenic to humans	
	Ethylbenzene	100-41-4
	Naphthalene	91-20-3
	Cumene	98-82-8
ACGIH	No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.	
OSHA	No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.	
NTP	Reasonably anticipated to be a human carcinogen	
	Naphthalene	91-20-3
	Cumene	98-82-8

Further information**Product:**

Remarks: Symptoms of overexposure may be headache, dizziness, tiredness, nausea and vomiting., Concentrations substantially above the TLV value may cause narcotic effects., Solvents may degrease the skin.

SECTION 12. ECOLOGICAL INFORMATION**Ecotoxicity**

No data available

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Persistence and degradability

No data available

Bioaccumulative potential

No data available

Mobility in soil

No data available

Other adverse effects

No data available

Product:

Regulation 40 CFR Protection of Environment; Part 82 Protection of Stratospheric Ozone - CAA Section 602 Class I Substances

Remarks This product neither contains, nor was manufactured with a Class I or Class II ODS as defined by the U.S. Clean Air Act Section 602 (40 CFR 82, Subpt. A, App.A + B).

Additional ecological information : No data available

SECTION 13. DISPOSAL CONSIDERATIONS**Disposal methods**

EPA Hazardous Waste Code(s) : D001: Ignitable
D018: Benzene

Waste from residues : Do not dispose of waste into sewer.
Do not contaminate ponds, waterways or ditches with chemical or used container.
Send to a licensed waste management company.
Catalyzed resin can generate hazardous exothermic heat if allowed to polymerize in a mass. All soiled or waste materials must be water soaked, and kept in a closed bin until disposed of.
Dispose of the solid mass only if cure is complete and the mass has cooled. Follow federal, state or local disposal regulations.

Do not dispose of waste into sewer.
Do not contaminate ponds, waterways or ditches with chemical or used container.
Send to a licensed waste management company.

Contaminated packaging : Empty remaining contents.
Dispose of as unused product.
Do not re-use empty containers.
Do not burn, or use a cutting torch on, the empty drum.

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SECTION 14. TRANSPORT INFORMATION**International Regulation****IATA-DGR**

UN/ID No. : UN 1866
 Proper shipping name : Resin solution
 Class : 3
 Packing group : III
 Labels : Flammable liquid
 Packing instruction (cargo aircraft) : 366
 Packing instruction (passenger aircraft) : 355

IMDG-Code

UN number : UN 1866
 Proper shipping name : RESIN SOLUTION
 Class : 3
 Packing group : III
 Labels : 3
 EmS Code : F-E, S-E
 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**49 CFR**

UN/ID/NA number : UN 1866
 Proper shipping name : Resin solution
 Class : 3
 Packing group : III
 Labels : Flammable liquid
 ERG Code : 127
 Marine pollutant : no

SECTION 15. REGULATORY INFORMATION**EPCRA - Emergency Planning and Community Right-to-Know Act****US. EPA CERCLA Hazardous Substances (40 CFR 302)**

Components	CAS-No.	Component RQ (lbs)	Calculated product RQ (lbs)
Xylene	1330-20-7	100	474

SARA 304 - Emergency Release Notification

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Calculated RQ exceeds reasonably attainable upper limit.

US. EPA Emergency Planning and Community Right-To-Know Act (EPCRA) SARA Title III Section 302 Extremely Hazardous Substance (40 CFR 355, Appendix A)

Calculated RQ exceeds reasonably attainable upper limit.

SARA 311/312 Hazards : Fire Hazard
 Acute Health Hazard
 Chronic Health Hazard

SARA 302 : No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

SARA 313 : This product contains the following toxic chemical(s) subject to the reporting requirements of Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR part 372.

Xylene	1330-20-7	21.0 %
Ethylbenzene	100-41-4	5.3 %
Naphthalene	91-20-3	.1 %

Clean Air Act

The following chemical(s) are listed as HAP under the U.S. Clean Air Act, Section 12 (40 CFR 61):

Xylene	1330-20-7	21.0 %
Ethylbenzene	100-41-4	5.3 %

This product does not contain any chemicals listed under the U.S. Clean Air Act Section 112(r) for Accidental Release Prevention (40 CFR 68.130, Subpart F).

The following chemical(s) are listed under the U.S. Clean Air Act Section 111 SOCM I Intermediate or Final VOC's (40 CFR 60.489):

Xylene	1330-20-7	21.0 %
Ethylbenzene	100-41-4	5.3 %

Non-volatile (Wt) : Refer to the product technical data sheet for VOC information.

Massachusetts Right To Know

Stoddard Solvent (Mineral spirits)	8052-41-3
Xylene	1330-20-7
Ethylbenzene	100-41-4
Formaldehyde	50-00-0
Benzene	71-43-2

Pennsylvania Right To Know

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Alkyd Resin	-
Stoddard Solvent (Mineral spirits)	8052-41-3
Xylene	1330-20-7
Phenolic resin	-
Ethylbenzene	100-41-4
1,2,4-Trimethylbenzene	95-63-6
Toluene	108-88-3
Naphthalene	91-20-3
Cumene	98-82-8
Formaldehyde	50-00-0

New Jersey Right To Know

Alkyd Resin	-
Stoddard Solvent (Mineral spirits)	8052-41-3
Xylene	1330-20-7
Phenolic resin	-
Ethylbenzene	100-41-4
Toluene	108-88-3
Naphthalene	91-20-3

New Jersey Trade Secret Registry Number for the product (NJ TSRN) : NOT APPLICABLE

California Prop 65

WARNING! This product contains a chemical known to the State of California to cause cancer.

Ethylbenzene	100-41-4
Naphthalene	91-20-3
Cumene	98-82-8
Formaldehyde	50-00-0
Benzene	71-43-2

WARNING: This product contains a chemical known to the State of California to cause birth defects or other reproductive harm.

Toluene	108-88-3
Benzene	71-43-2

The components of this product are reported in the following inventories:

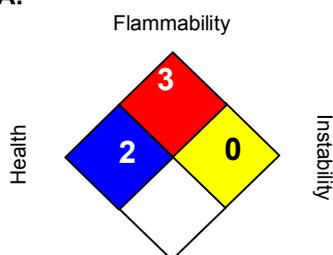
- TSCA : We certify that all of the components of this product are either listed on the TSCA Inventory or are not subject to the notification requirements per 40 CFR 720.30(h).
- Section 4 / 12(b) : Not applicable
- Section 5 : Not applicable
- DSL : We certify that all of the components of this product are listed on the DSL.

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SECTION 16. OTHER INFORMATION**Further information****NFPA:**

Special hazard.

HMIS III:

HEALTH	2*
FLAMMABILITY	3
PHYSICAL HAZARD	0

0 = not significant, 1 =Slight,
 2 = Moderate, 3 = High
 4 = Extreme, * = Chronic

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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 given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.