



<http://www.desertsilicon.com/>

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1. Identification


Product Name:	P-210; P-220; P-230; P-240; P-250; P-260; P-280; P-640 Series
Product Number:	1301000A, 1301001A, 1301002A, 1301003A, 1301004A, 1301005A, 1301006A, 1301007A
Synonyms:	Spin-on Glass
Chemical Name:	Mixture
Chemical Family:	Organometallic Solution

2. Hazard(s) identification


Classification of the substance or mixture
Classification according to Regulation (EC) No 1272/2008

	GHS02 Flame
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Flam. Liq. 2 H225 Highly flammable liquid and vapor.


	GHS08 Health hazard
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STOT SE 2 H371 May cause damage to organs.

	GHS07
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Acute Tox. 4 H302 Harmful if swallowed.
 Acute Tox. 4 H312 Harmful in contact with skin.
 Acute Tox. 4 H332 Harmful if inhaled.
 Eye Irrit. 2A H319 Causes serious eye irritation.

Classification according to Directive 67/548/EEC or Directive 1999/45/EC

	T; Toxic
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	Xn; Harmful
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R20/21/22: Harmful by inhalation, in contact with skin and if swallowed.
 -68/20/21/22: Harmful: possible risk of irreversible effects through inhalation, in contact with skin and if swallowed.

	Xi; Irritant
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R36: Irritating to eyes.

DESERT SILICON

Product name: P-210; P-220; P-230; P-240; P-250; P-260; P-280; P-640 Series

	F; Highly Flammable.
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R11: Highly Flammable.

R66-67: Repeated exposure may cause skin dryness or cracking. Vapors may cause drowsiness and dizziness

Information concerning particular hazards for human and environment: Not applicable
Hazards not otherwise classified: No information known.

Label elements

Labeling according to Regulation (EC) No 1272/2008

The substance is classified and labeled according to the CLP regulation.

Hazard pictograms

		
GHS02	GHS07	GHS08

Signal word: Danger

Hazard-determining components of labeling:

Methanol

Hazard statements

H225 Highly flammable liquid and vapor.
 H302+H312+H332 Harmful if swallowed, in contact with skin or if inhaled.
 H319 Causes serious eye irritation.
 H371 May cause damage to organs.

Precautionary statements

P210 Keep away from heat/sparks/open flames/hot surfaces. No smoking.
 P241 Use explosion-proof electrical/ventilating/lighting/equipment.
 P260 Do not breathe dust/fume/gas/mist/vapors/spray.
 P280 Wear protective gloves/protective clothing/eye protection/face protection.
 P303+P361+P353 If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower
 P302+P352 IF ON SKIN: Wash with plenty of water
 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.
 P405 Store locked up.
 P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

WHMIS classification

B2 – Flammable liquid
 D2A – Very toxic material causing other toxic effects

	
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Classification system

HMIS ratings (scale 0-4)

(Hazardous Materials Identification System)

HEALTH	2	
FIRE	3	
REACTIVITY	1	

Health (acute effects) = 2
 Flammability = 3
 Physical Hazard = 1

DESERT SILICON

Product name: P-210; P-220; P-230; P-240; P-250; P-260; P-280; P-640 Series

Other hazards

Results of PBT and vPvB assessment

PBT: Not applicable

vPvB: Not applicable

3. Composition/information on ingredients

Chemical characterization: Mixtures

Component	Classification	Concentration	ACGIH TLV	OSHA PEL
Ethanol				
	64-17-5	28-46%	1000 ppm, 1900 mg/m ³ TWA	1000 ppm, 1900 mg/m ³ TWA
Ethyl Acetate				
	141-78-6	6-7%	400 ppm, 1440 mg/m ³ TWA	400 ppm, 1400 mg/m ³ TWA
Proprietary solvent				
	78-10-4	<20%	100 ppm (850 mg/m ³) OSHA TWA 10 ppm (85 mg/m ³) OSHA TWA (vacated by 58 FR 35338, June 30, 1993) 10 ppm ACGIH TWA 10 ppm (85 mg/m ³) NIOSH recommended TWA 10 hour(s)	
Isopropyl alcohol				
	67-63-0	2-3%	200 ppm, 491 mg/m ³ TWA	400 ppm, 980 mg/m ³ TWA
Methanol				
	67-56-1	2-3%	200 ppm, 262 mg/m ³ TWA	200 ppm, 260 mg/m ³ TWA
Phosphorus Silicate Polymer				
	Trade Secret	<20%	No information	No information

4. First-aid measures

Description of first aid measures

After inhalation

Supply fresh air. If required, provide artificial respiration. Keep patient warm.

Seek immediate medical advice.

After Skin contact

Immediately wash with water and soap and rinse thoroughly

Seek immediate medical advice

After eye contact

Rinse opened eye for several minutes under running water. Then consult a doctor.

After swallowing

Drink lots of water.

Administer medical carbon.

Administer a solution of sodium carbonate.

Do not give milk or fatty oils.

Do not initiate vomiting

Seek medical treatment

Information for doctor

Most important symptoms and effects, both acute and delayed

No further relevant information available.

Danger If swallowed or in case of vomiting, danger of entering the lungs.

Indication of any immediate medical attention and special treatment needed

No further relevant information available.

DESERT SILICON

Product name: P-210; P-220; P-230; P-240; P-250; P-260; P-280; P-640 Series

5. Fire-fighting measures

Extinguishing media

Suitable extinguishing agents

Carbon dioxide, sand, extinguishing powder.

Special hazards arising from the substance or mixture

If this product is involved in a fire, the following can be released:

Carbon monoxide and carbon dioxide

Silicon oxide

Phosphorus oxide

Advice for firefighters

Protective equipment:

Wear self-contained respirator.

Wear fully protective impervious suit.

6. Accidental measures

Personal precautions, protective equipment and emergency procedures

Wear protective equipment. Keep unprotected persons away.

Ensure adequate ventilation

Keep away from ignition sources

Environmental precautions:

Do not allow material to be released to the environment without proper governmental permits.

Do not allow to enter sewers/surface or ground water.

Do not allow product to reach sewage system or any water course.

Do not allow to penetrate the ground/soil.

Methods and material for containment and cleaning up:

Keep away from ignition sources.

Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust)

Dispose contaminated material as waste according to item 13.

Ensure adequate ventilation.

Prevention of secondary hazards: Keep away from ignition sources.

Reference to other sections

See Section 7 for information on safe handling

See Section 8 for information on personal protection equipment.

See Section 13 for disposal information.

7. Handling and storage

Handling

Precautions for safe handling

Keep container tightly sealed.

Store in cool, dry place in tightly closed containers.

Ensure good ventilation at the workplace.

Open and handle container with care.

Information about protection against explosions and fires:

Protect against electrostatic charges.

Fumes can combine with air to form an explosive mixture.

Keep ignition sources away.

Conditions for safe storage, including any incompatibilities

Storage

Requirements to be met by storerooms and receptacles:

Provide solvent resistant, sealed floor.

Store in a cool location.

DESERT SILICON

Product name: P-210; P-220; P-230; P-240; P-250; P-260; P-280; P-640 Series

Information about storage on one common storage facility:
 Store away from oxidizing agents.
 Store away from water/moisture.
Further information about storage conditions:
 This product is moisture sensitive.
 Keep container tightly sealed.
 Store in cool, dry conditions in well sealed containers.
 Protect from humidity and water
Specific end use(S) No further relevant information.

8. Exposure controls/personal protection

Additional information about design of technical systems:
 Properly operating chemical fume hood designed for hazardous chemicals and having an average face velocity of at least 100 feet per minute.

Control parameters

Components with limit values that require monitoring at the workplace:

141-78-6 Ethyl acetate (6-7%)	
PEL (USA)	Long-term value: 1400 mg/m ³ , 400 ppm
REL (USA)	Long-term value: 1400 mg/m ³ , 400 ppm
TLV (USA)	Long-term value: 1440 mg/m ³ , 400 ppm
EL (Canada)	Long-term value: 150ppm
EV (Canada)	Long-term value: 1.440 mg/m ³ , 400ppm
67-63-0 Isopropyl alcohol (2-3%)	
PEL (USA)	Long-term value: 980 mg/m ³ , 400 ppm
REL (USA)	Short-term value: 1225 mg/m ³ , 500 ppm Long-term value: 980 mg/m ³ , 400 ppm
TLV (USA)	Short-term value: 984 mg/m ³ , 400 ppm Long-term value: 492 mg/m ³ , 200 ppm BEI
EL (Canada)	Short-term value: 400 ppm Long-term value: 200ppm
EV (Canada)	Short-term value: 400 ppm Long-term value: 200ppm
64-17-5 Ethanol (28-46%)	
PEL (USA)	Long-term value: 1900 mg/m ³ , 1000 ppm
REL (USA)	Long-term value: 1900 mg/m ³ , 1000 ppm
TLV (USA)	Short-term value: 1880 mg/m ³ , 1000 ppm
EV (Canada)	Long-term value: 1.900 mg/m ³ , 1.000 ppm

DESERT SILICON

Product name: P-210; P-220; P-230; P-240; P-250; P-260; P-280; P-640 Series

Components with limit values that require monitoring at the workplace:	
67-56-1 Methanol (2-3%)	
PEL (USA)	Long-term value: 260 mg/m ³ , 200 ppm
REL (USA)	Short-term value: 325 mg/m ³ , 250 ppm
	Long-term value: 260 mg/m ³ , 200 ppm
	Skin
TLV (USA)	Short-term value: 1880 mg/m ³ , 1000 ppm
	Long-term value: 262 mg/m ³ , 200 ppm
	Skin; BEI
EL (Canada)	Short-term value: 250 ppm
	Long-term value: 200ppm
	Skin
EV (Canada)	Short-term value: 325 mg/m ³ , 250 ppm
	Long-term value: 260 mg/m ³ , 200ppm
	Skin

Ingredients with biological limit values:	
67-63-0 Isopropyl alcohol (2-3%)	
BEI (USA)	40 mg/L
	Media: urine
	Time: end of shift at end of workweek
	Parameter: Acetone (background, nonspecific)
67-56-1 Methanol (2-3%)	
BEI (USA)	15 mg/L
	Media: urine
	Time: end of shift
	Parameter: Methanol (background, nonspecific)

Additional information: No data

Exposure controls

Personal protective equipment

General protective and hygienic measures

The usual precautionary measures for handling chemicals should be followed.

Keep away from foodstuffs, beverages and feed.

Remove all soiled and contaminated clothing immediately.

Wash hands before breaks and at the end of work.

Do not inhale dust/smoke/mist.

Store protective clothing separately.

Avoid contact with the eyes and skin.

Maintain an ergonomically appropriate working environment.

Breathing equipment:

Use self-contained breathing apparatus (SCBA) as a backup to engineering controls. Risk assessment should be performed. Only use equipment tested and approved under appropriate government standards such as NIOSH (USA) or CEN (EU).

Protection of hands:

Impervious gloves

Check protective gloves prior to each use for their proper condition.

The selection of suitable gloves not only depends on the material, but also on quality.

Quality will vary from manufacturer to manufacturer.

Eye protection: Safety glasses

Body protection: Protective work clothing.

DESERT SILICON

Product name: P-210; P-220; P-230; P-240; P-250; P-260; P-280; P-640 Series

9. Physical and chemical properties

Information on basic physical and chemical properties General Information	
Appearance: Form: Color Odor: Odor threshold:	Liquid Colorless Alcohol-like Not determined
pH-value	Not determined.
Change in condition Melting point/Melting range: Boiling point/Boiling range: Sublimation temperature/start:	~-90 °C (-130 °F) ~100 °C (212 °F) Not determined
Flash point: Flammability (solid, gaseous) Ignition temperature: Decomposition temperature: Auto igniting:	~30 °C (86 °F) Not applicable. ~400 °C (752 °F) Not determined Product is not self-igniting.
Danger of explosion: Explosion limits: Lower: Upper: Vapor pressure at 20 °C (68 °F): Density at 20 °C (68 °F): Relative density Vapor density Evaporation rate Solubility in/Miscibility with Water: Partition coefficient (n-octanol/water): Viscosity: dynamic kinematic:	Product is not explosive. However, formation of explosive air/vapor mixtures is possible. 3,5 Vol % 15.0 Vol % ~35 hPa (26 mm Hg) 0.789 g/cm ³ Not determined. Not determined. Not determined. Fully miscible Not determined. Not determined. Not determined.
Solvent content: Organic solvents: Other information	 No further relevant information available.

10. Stability and reactivity

Reactivity No information known.

Chemical stability Stable under recommended storage conditions.

Thermal decomposition/conditions to be avoided:
Decomposition will not occur if used and stored according to specifications.

Possibility of hazardous reactions Possible formation of peroxides.

Incompatible materials:
Oxidizing agents
Acid chlorides
Water/moisture

Hazardous decomposition products:
Carbon monoxide and carbon dioxide
Silicon oxide

DESERT SILICON

Product name: P-210; P-220; P-230; P-240; P-250; P-260; P-280; P-640 Series

11. Toxicological information

Information on toxicological effects

Acute toxicity:

Harmful if inhaled.

Harmful if swallowed.

Danger through skin absorption.

LD/LD50 values that are relevant for classification:

67-56-1 Methanol

Oral	LD50	14200 mg/kg (rabbit)
Inhalative	LD50/6H	41000 ppm/6H (mouse)

67-63-0 Isopropanol

Oral	LD50	3600mg/kg (mouse) 5000 mg/kg (rat)
Dermal	LD50	12800 mg/kg (rabbit)
Inhalative	LD50/8H	16000 ppm/8H (rat)

Skin irritation or corrosion: Causes mild irritant effect.

Eye irritation or corrosion: Causes mild irritant effect.

Sensitization: No sensitizing effects known.

Germ cell mutagenicity:

The Registry of Toxic Effects of Chemical Substances (RTECS) contains mutation data for components in this product.

Carcinogenicity:

ACGIH A3: Animal carcinogen: Agent is carcinogenic in experimental animals at a relatively high dose, by route(s) of administration, at site(s), of histologic type(s), or by mechanism(s) not considered relevant to worker exposure. Available epidemiologic studies do not confirm on increased risk of cancer in exposed humans. Available evidence suggests that the agent is not likely to cause cancer in humans except under uncommon or unlikely routes or levels of exposure.

IARC-3: Not classifiable as to carcinogenicity to humans.

ACGIH A4: Not Classifiable as a human carcinogen: Inadequate data on which to classify the agent in terms of its carcinogenicity in humans and/or animals.

The Registry of Toxic Effects of Chemical Substances (RTECS) contains reproductive data for components in this product.

Reproductive toxicity: May damage fertility or the unborn child.

Specific target organ system toxicity – repeated exposure: No effects known.

Specific target organ system toxicity – single exposure: May cause damage to organs.

Aspiration hazard: No effects known.

Other information (about experimental toxicity):

Reproductive effects have been observed on tests with laboratory animals.

Subacute to chronic toxicity:

2-Mechoxyethanol (ethylene glycol monomethyl ether) has caused birth defects, bone marrow damage, anemia, fetotoxicity, immunosuppression and damage to the male reproductive system. Acute effects can include nausea, headache and vomiting. Chronic exposure also causes kidney, liver, lung, central nervous system and immune system damage.

The Registry of Toxic Effects of Chemical Substances (RTECS) contains multiple dose toxicity data for this substance.

Additional toxicological information:

To the best of our knowledge the acute and chronic toxicity of this substance is not fully known.

12. Ecological information

Toxicity

Aquatic toxicity: No further relevant information available.

Persistence and degradability: No further relevant information available.

Biaccumulative potential: No further relevant information available.

DESERT SILICON

Product name: P-210; P-220; P-230; P-240; P-250; P-260; P-280; P-640 Series

Mobility in soil: No further relevant information available.

Additional ecological information:

General notes:

Do not allow material to be released to the environment without proper governmental permits.

Do not allow product to reach ground water, water course or sewage system.

Danger to drinking water if even small quantities leak into the ground.

Avoid transfer into the environment.

Results of PET and vPvB assessment

PBT: Not applicable.

vPvB: Not applicable.

Other adverse effects: No further relevant information available.

13. Disposal considerations

Waste treatment methods




Recommendation Consult state, local or national regulations to ensure proper disposal.

Uncleaned packaging's:

Recommendation: Disposal must be made according to official regulations.

Recommended cleansing agent: Water, if necessary with cleansing agents.

14. Transport information

UN-Number DOT, ADR, IMDG, IATA	UN1993
UN proper shipping name DOT, ADR, IMDG, IATA	Flammable liquids, n.o.s.
Transport hazard class(es) DOT	
	
Class Label ADR	3 Flammable liquids 3
	
Class Label IMDG, IATA	3 (F1) Flammable liquids
	
Class Label	3 Flammable liquids. 3
Packing group DOT, ADR, IMDG, IATA	II
Environmental hazards:	Not applicable.
Special precautions for user Danger code (Kemler):	Warning: Flammable liquids 33
EMS Number:	F-E, S-E
Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code	Not applicable.
Transport/Additional information:	

DESERT SILICON

Product name: P-210; P-220; P-230; P-240; P-250; P-260; P-280; P-640 Series

DOT Marine Pollutant (DOT)	No
UN "Model Regulation":	UN1993, Flammable liquid, n.o.s., 3, II

15. Regulatory information

Safety, health and environmental regulations/legislation specific for the substance or mixture

National regulations
All components of this product are listed in the U.S. Environmental Protection Agency Toxic Substances Control Act Chemical substance Inventory.

SARA Section 313 (specific toxic chemical listings)		
67-56-1	Methanol	2-3%
67-63-0	Isopropanol	2-3%

California Proposition 65

Prop 65 - Chemicals known to cause cancer Substance is not listed.

Prop 65 - Development toxicity		
67-56-1	Methanol	2-3%

Prop 65 - Development toxicity, female Substance is not listed.

Prop 65 - Development toxicity, male		
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Information about limitation of use:
For use only by technically qualified individuals.
This substance is subject to a Significant New Use Rule (SNUR) promulgated under Section 5(a)(2) of the Toxic Substances Control Act (TSCA). See 40 CFR 721. This product is being sold for research and development use.
This product is subject to the reporting requirements of section 313 of the Emergency Planning and Community Right to Know Act of 1986 and 40 CFR372.

Other regulations, limitations and prohibitive regulations

Substances of very high concern (SVHC) according to REACH, Article 57
This product contains a product listed by the European Chemicals Agency (ECHA) as a Substance of Very High Concern (SVHC). Information concerning SVHC can be found in Annex XIV for the REACH Regulation.

REACH – Pre-registered substances Substance is listed.

Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

16. Other information

Desert Silicon, INC has compiled the information and recommendations contained in this Safety Data Sheet from sources believed to be reliable and to represent the most reasonable current opinion on the subject when the SDS was prepared. While the above information is believed to be accurate, no warranty, guaranty, or representation is made as to the correctness or sufficiency of the information and the information is intended only as a guide. Desert Silicon, INC shall not be held liable for any damage resulting from handling or from contact with this product. The user of this product must decide what safety measures are necessary to safely use this product, either alone or in combination with other products, and determine environmental regulatory compliance obligations under any applicable Local Laws. Net value=0