

Material Safety Data Sheet



NeoCryl A-1091

Section 1. Chemical product and company identification

Product name : NeoCryl A-1091

Supplier : DSM NeoResins+, Inc. Telephone : +1 (978) 658-6600
730 Main Street
Wilmington, MA 01887
USA

Material uses : Resin used in the production of coatings, inks and/or adhesives

Emergency telephone number : 800-424-9300 Medical Emergency

For chemical emergency, spill, leak, fire, exposure or accident: call CHEMTREC day or night. DOMESTIC NORTH AMERICA 800-424-9300; INTERNATIONAL, CALL 703-527-3887 (collect calls accepted)

Section 2. Hazards identification

Physical state : Liquid.

Odor : Practically odourless

Emergency overview : Caution
MAY CAUSE RESPIRATORY TRACT IRRITATION.
Slightly irritating to the respiratory system. Avoid breathing vapor or mist. Use only with adequate ventilation. Keep container tightly closed and sealed until ready for use.

OSHA/HCS status : While this material is not considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200), this MSDS contains valuable information critical to the safe handling and proper use of the product. This MSDS should be retained and available for employees and other users of this product.

Hazardous Material Information System (U.S.A.)

Health	1
Flammability	1
Physical hazards	0
PERSONAL PROTECTION	

The PPE (Personal Protection Equipment) designation in the HMIS is provided for use by employees at supplier sites only. Other users of this product are encouraged to evaluate the hazards of the product and assign PPE that is applicable to their specific situations.

Potential acute health effects

Inhalation : Slightly irritating to the respiratory system.

Ingestion : No known significant effects or critical hazards.

Skin : No known significant effects or critical hazards.

Eyes : No known significant effects or critical hazards.

Potential chronic health effects

Chronic effects : No known significant effects or critical hazards.

Carcinogenicity : No known significant effects or critical hazards.

Mutagenicity : No known significant effects or critical hazards.

Teratogenicity : No known significant effects or critical hazards.

Developmental effects : No known significant effects or critical hazards.

Fertility effects : No known significant effects or critical hazards.

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Medical conditions aggravated by over-exposure : None known.

See toxicological information (Section 11)

Section 3. Composition/information on ingredients

Name	CAS number	% by weight
Ammonia, aqueous solution 100%	1336-21-6	0.1 - 1
styrene	100-42-5	0.01 - 0.1

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

Section 4. First aid measures

Eye contact	: Rinse with plenty of running water. Get medical attention if symptoms occur.
Skin contact	: Wash with soap and water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.
Inhalation	: If inhaled, remove to fresh air. Get medical attention if symptoms occur.
Ingestion	: If swallowed, rinse mouth with water (only if the person is conscious). Get medical attention if symptoms occur.
Protection of first-aiders	: No action shall be taken involving any personal risk or without suitable training. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation.
Notes to physician	: No specific treatment. Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.

Section 5. Fire-fighting measures

Flammability of the product	: In a fire or if heated, a pressure increase will occur and the container may burst.
Hazardous thermal decomposition products	: In case of fire, may produce hazardous decomposition products such as carbon monoxide, carbon dioxide, (dense) black smoke, aldehydes, organic acids.
Extinguishing media	
Suitable	: Use water, foam or dry chemical powder.
Special fire-fighting procedures	: No special measures required.
Protection of fire-fighters	: Wear suitable protective clothing. Self-contained breathing apparatus.
Remarks	: The material will not support combustion unless the water has evaporated.

Section 6. Accidental release measures

Personal precautions	: No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Avoid breathing vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment (see Section 8).
Environmental precautions	: No special measures required.
Methods for cleaning up	: Absorb spill with inert material (e.g. dry sand or earth) and place in a chemical waste container. Recycle, if possible. Clean up affected area with a large amount of water.

Section 7. Handling and storage

- Handling** : Use with adequate ventilation.
- Storage** : Store in a fireproof location. Keep away from incompatible materials and avoid specific conditions (See section 10). Sensitive to frost.
- Storage temperature** : Store between the following temperatures: 5 and 40 °C.

Section 8. Exposure controls/personal protection

- Engineering controls** : Use only with adequate ventilation. If user operations generate dust, fumes, gas, vapor or mist, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits.

Personal protection

- Eyes** : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists or dusts.
- Skin** : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.
- Respiratory** : Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator. If respiratory protection is needed, use a NIOSH certified respirator with an Assigned Protection Factor (APF) of at least 10.
- Hands** : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary.

Product name

styrene

Exposure limits

ACGIH TLV (United States, 2/2010).

- TWA: 20 ppm 8 hour(s).
 TWA: 85 mg/m³ 8 hour(s).
 STEL: 40 ppm 15 minute(s).
 STEL: 170 mg/m³ 15 minute(s).

OSHA PEL 1989 (United States, 3/1989).

- TWA: 50 ppm 8 hour(s).
 TWA: 215 mg/m³ 8 hour(s).
 STEL: 100 ppm 15 minute(s).
 STEL: 425 mg/m³ 15 minute(s).

OSHA PEL Z2 (United States, 11/2006).

- TWA: 100 ppm 8 hour(s).
 CEIL: 200 ppm
 AMP: 600 ppm 5 minute(s).

NIOSH REL (United States, 6/2009).

- TWA: 50 ppm 10 hour(s).
 TWA: 215 mg/m³ 10 hour(s).
 STEL: 100 ppm 15 minute(s).
 STEL: 425 mg/m³ 15 minute(s).

Consult local authorities for acceptable exposure limits.

Section 9. Physical and chemical properties

Physical state	: Liquid.
Flash point	: Closed cup: >100°C (>212°F) [(estimate)] [Product does not sustain combustion.]
Color	: White, translucent.
Odor	: Practically odourless
pH	: 8.1 to 8.5
Boiling point	: 100°C (212°F)
Specific gravity	: 1.04
Vapor pressure	: 2.3 kPa (17.251 mm Hg) [20°C]
Vapor density	: <1 [Air = 1]
Viscosity	: Dynamic: 250 mPa·s (250 cP)
Solubility	: Partially soluble in the following materials: cold water and hot water.
Remarks	: Miscible in water.

Section 10. Stability and reactivity

Stability and reactivity	: The product is stable.
Conditions to avoid	: Keep away from heat, sparks and flame.
Materials to avoid	: No special recommendations.
Hazardous decomposition products	: Under normal conditions of storage and use, hazardous decomposition products should not be produced.
Possibility of hazardous reactions	: Under normal conditions of storage and use, hazardous reactions will not occur.

Section 11. Toxicological information

Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
styrene	LD50 Dermal	Rat	>2000 mg/kg	-
	LD50 Oral	Rat	5000 mg/kg	-
	LC50 Inhalation Vapor	Rat	12 g/m ³	4 hours

Conclusion/Summary : Not available.

Chronic toxicity

Conclusion/Summary : Not available.

Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation
styrene	Respiratory - Irritant	Mammal - species unspecified	-	-	-

Conclusion/Summary : Not available.

Sensitizer

Conclusion/Summary : Not available.

Carcinogenicity

Conclusion/Summary : Not available.

Classification

Product/ingredient name	ACGIH	IARC	EPA	NIOSH	NTP	OSHA
styrene	A4	2B	-	-	-	-

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Mutagenicity

Product/ingredient name	Test	Experiment	Result
Ammonia, aqueous solution 100%	Ames test	Experiment: In vitro Subject: Bacteria	Negative

Conclusion/Summary : Not available.

Teratogenicity

Conclusion/Summary : Not available.

Reproductive toxicity

Conclusion/Summary : Not available.

Section 12. Ecological information

Ecotoxicity : No known significant effects or critical hazards.

Aquatic ecotoxicity

Product/ingredient name	Result	Species	Exposure
styrene	Acute EC50 4.9 mg/l Acute LC50 4.02 mg/l Chronic NOEC 1.01 mg/l	Algae Fish Daphnia	72 hours 96 hours 21 days

Conclusion/Summary : Not available.

Persistence/degradability

Conclusion/Summary : Not available.

Section 13. Disposal considerations

Waste disposal : Waste must be disposed of in accordance with national and local environmental regulations.

Disposal should be in accordance with applicable regional, national and local laws and regulations.

Refer to Section 7: HANDLING AND STORAGE and Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION for additional handling information and protection of employees.

Consult your local or regional authorities.

Section 14. Transport information

Regulatory information	UN number	Proper shipping name	Class	Packing group	Label	Additional information
DOT Classification	Not regulated.	-	-	-		-
TDG Classification	Not regulated.	-	-	-		-
Mexico Classification	Not regulated.	-	-	-		-
ADR/RID Class	Not regulated.	-	-	-		-
IMDG Class	Not regulated.	-	-	-		-
IATA-DGR Class	Not regulated.	-	-	-		-

Section 15. Regulatory information

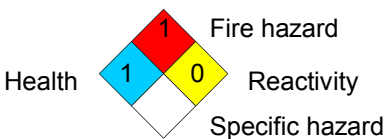
Clean Air Act Section 112(b) Hazardous Air Pollutants (HAPs) : Not listed

SARA 313

	<u>Product name</u>	<u>CAS number</u>	<u>Concentration</u>
Form R - Reporting requirements	: No products were found.		
State regulations	: Connecticut Carcinogen Reporting: None of the components are listed. Connecticut Hazardous Material Survey: None of the components are listed. Florida substances: None of the components are listed. Illinois Chemical Safety Act: None of the components are listed. Illinois Toxic Substances Disclosure to Employee Act: None of the components are listed. Louisiana Reporting: None of the components are listed. Louisiana Spill: None of the components are listed. Massachusetts Spill: None of the components are listed. Massachusetts Substances: None of the components are listed. Michigan Critical Material: None of the components are listed. Minnesota Hazardous Substances: None of the components are listed. New Jersey Hazardous Substances: None of the components are listed. New Jersey Spill: None of the components are listed. New Jersey Toxic Catastrophe Prevention Act: None of the components are listed. New York Acutely Hazardous Substances: None of the components are listed. New York Toxic Chemical Release Reporting: None of the components are listed. Pennsylvania RTK Hazardous Substances: None of the components are listed. Rhode Island Hazardous Substances: None of the components are listed.		
United States inventory (TSCA 8b)	: All components are listed or exempted.		

Section 16. Other information

Label requirements : MAY CAUSE RESPIRATORY TRACT IRRITATION.
National Fire Protection Association (U.S.A.) :



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Notice to reader

The information contained in the Material Safety Data Sheet is based on our data available on the date of publication. The information is intended to aid the user in controlling the handling risks; it is not to be construed as a warranty or specification of the product quality. The information may not be or may not altogether be applicable to combinations of the product with other substances or to particular applications.

The user is responsible for ensuring that appropriate precautions are taken and for satisfying themselves that the data are suitable and sufficient for the product's intended purpose. In case of any unclarity we advise consulting the supplier or an expert.

Sources of key data : Literature data and/or investigation reports are available through the manufacturer.

Alterations compared to the previous version : Alterations compared to the previous version are marked with a little (blue) triangle.