





Trade Name: HYDREX® 100 33350-00

Revision Date: 2019-03-26 Compilation Date: 2015-02-19

1. PRODUCT AND COMPANY IDENTIFICATION

TRADE NAME HYDREX® 100 33350-00

MANUFACTURER

Reichhold LLC 2 Tel: +1-919-990-7500 Fax: +1-919-767-8602

Corporate Headquarters

P.O. Box 13582 Emergency Telephone: (Chemtrec) 1-800-424-9300

Research Triangle Park, NC 27709

USA

SUPPLIER

Aurora Glass Fibre (NZ) Ltd Tel: +64 09 273-3540 Fax: +64 09 273-3565

3/16 Zelanian Drive, East Tamaki,
Auckland 2013, New Zealand
Emergency Telephone No. +64 09 273-3540

Poisons Information Centre 0800 764 766 (from anywhere in New Zealand)

2. HAZARD IDENTIFICATION

Classified as Hazardous according to the New Zealand Hazardous Substances Regulations. Classified as Dangerous Goods for transport according to New Zealand Standard.

DG Classification: Class 3

UN Number: 1866, Resin Solution, Flammable

EPA New Zealand Approval Code: HSR001221







HSNO Classification:

3.1C Flammable Liquid

6.1E Acute Toxicity, Oral/Dermal 6.1D Acute Toxicity, Inhalation

6.3A Substance that is corrosive or irritating to the skin6.4A Substance that is corrosive or irritating to the eye

6.6B Suspected human mutagen6.7B Suspected human carcinogen

6.9B May cause damage to target organs through prolonged/repeated exposure

9.1C Aquatic ecotoxicity, Fish

Hazard Statement:

H226 Flammable liquid and vapour

H315 Causes skin irritation

H317 May cause an allergic reaction H319 Causes serious eye irritation

H332 Harmful if inhaled







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H351 Suspected of causing cancer

H361 Suspected of damaging fertility or the unborn child

H372 Causes damage to organs through prolonged or repeated exposure

Prevention:

P201 Obtain special instruction before use

P202 Do not handle until all safety precautions have been read and understood P210 Keep away from heat, sparks, open flames and hot surfaces. – No smoking

P240 Ground/bond container and receiving equipment

P241 Use explosion-proof electrical ventilating, lighting and other equipment

P242 Use only non-sparking tools

P243 Take precautionary measures against static discharge

P260 Do not breath fumes, mists, vapours or spray P262 Do not get in eyes, on skin, or on clothing

P270 Do not eat, drink or smoke when using this product

P280 Wear protective gloves, protective clothing and eye or face protection

Response:

P314 Get medical advice or attention if you feel unwell

P330 Rinse mouth

P362 Take off contaminated clothing and wash before reuse

P301+P312 IF SWALLOWED: Call a Poison Centre or doctor P302+P352 IF ON SKIN: Wash with plenty of soap and 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

P308+P313 If exposed or concerned: Get medical advice
P333+P313 If skin irritation or rash occurs: Get medical advice
P337+P313 If eye irritation persists: Get medical advice

P370+P378 In case of fire, use carbon dioxide, dry chemical, water fog. Alcohol resistant foam is the

preferred firefighting medium, but if it is not available, normal foam can be used

Storage:

P405 Store locked up

P422 Store contents below 25°C

P403+P233 Store in well ventilated place. Keep container tightly closed

Disposal:

P501 Dispose of contents to an approved waste disposal plant

Hazards not otherwise classified (HNOC)

Other Information

May be harmful in contact with skin.

Unknown acute toxicity 55.1% of the mixture consists of ingredient(s) of unknown toxicity.

Unknown aquatic toxicity 55.4% of the mixture consists of component(s) of unknown hazards to the aquatic environment.







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3. COMPOSITION / INFORMATION ON INGREDIENTS

Component	CAS No	Weight-%	Trade Secret
Vinyl Ester Resin	Proprietary	53.5	
Styrene	100-42-5	45.0	
Silica, Amorphous, Fumed, CrystFree	112945-52-5	<2.0	
Cobalt compounds	Proprietary	<0.3	*

^{*}The exact percentage (concentration) of composition has been withheld as a trade secret. If CAS number is "proprietary", the specific chemical identity has been withheld as a trade secret.

4. FIRST AID MEASURES

Eye Contact

Immediately flush eyes for at least 15 minutes. Get medical attention.

Skin Contact

Wash off with warm water and soap. Remove contaminated clothing and shoes. If skin irritation persists, call a physician. Wash contaminated clothing before reuse.

Inhalation

Remove person to fresh air. If signs/symptoms continue, get medical attention. Keep patient warm and at rest. If not breathing, give artificial respiration. If breathing is laboured, administer oxygen. Get medical attention immediately.

Ingestion

Do NOT induce vomiting. Aspiration hazard if swallowed – can enter lungs and cause damage. This material may enter the lungs during vomiting. Never give anything by mouth to an unconscious person. GET IMMEDIATE MEDICAL ATTENTION.

Most important symptoms and effects, both acute and delayed

Inhalation of high vapour concentrations can cause CNS-depression and narcosis.

Indication of any immediate medical attention and special treatment needed

Notes to Physician: Treat symptomatically

5. FIRE FIGHTING MEASURES

Suitable Extinguishing Media

Carbon dioxide (CO2), Foam, Dry Chemical, Water Spray.

Unsuitable Extinguishing Media

Do not use a solid water stream as it may scatter and spread fire.

Specific hazards arising from the chemical

Hazardous combustion products

Combustion may produce carbon monoxide, carbon dioxide and irritating or toxic vapours and gases.







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Combustion/Explosion Hazards

Flammable. Vapours may form explosive mixture with air. Flash back possible over considerable distance. Empty containers may retain product residue (liquid and/or vapor). Do not pressurize, cut, weld, braze, solder, drill, grind or expose these containers to heat, flame, sparks, static electricity, or other sources of ignition as the container may explode and may cause injury or death. Empty drums should be completely drained and properly bunged. Empty drums should be promptly returned to a drum reconditioner or properly disposed. Closed containers may rupture when exposed to extreme heat.

Protective Equipment and Precautions for Fire-Fighters

Wear self-contained breathing apparatus (SCBA) and full fire-fighting protective clothing. Thoroughly decontaminate all protective equipment after use. Evacuate all person from the fire area to a safe location. Move non-burning material, as feasible, to a safe location as soon as possible. Fire fighters should be protected from potential explosion hazard while extinguishing the blaze. DO NOT extinguish a fire resulting from the flow of this flammable liquid until the flow of liquid is effectively shut off. This precaution will help prevent the accumulation of an explosive vapor-air mixture after the initial fire is extinguished. Use water spray to cool fire-exposed containers.

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions

Remove all sources of ignition. Evacuate personnel to safe areas. Avoid contact with skin and eyes. Use personal protective equipment as required. Ensure adequate ventilation. Keep people away from and upwind of spill/leak. Beware of vapours accumulating to form explosive concentrations. Vapours can accumulate in low areas.

Environmental Precautions

Prevent further leakage or spillage if safe to do so. Do not allow material to contaminate ground water system. Prevent product from entering drains. Soak up with inert absorbent material and dispose of as hazardous waste. Beware of vapours accumulating to form explosive concentrations. Vapours can accumulate in low areas.

Methods for Containment

Prevent spilled material from contaminating soil, entering sanitary sewers, storm sewers, and drainage systems and entering bodies of water or ditches that lead to waterways. Prevent spreading over a wide area (e.g. by containment or oil barriers).

Methods for Clean-Up

Soak up with inert absorbent material. Remove from surface water (e.g. by skimming or siphoning). Dispose of contaminated material as waste according to item 13.

7. HANDLING AND STORAGE

Handling

Do not breathe vapour or mist. Avoid contact with eyes, skin and clothing. Wash hands before breaks and immediately after handling the product. Take off contaminated clothing and wash before reuse. Ensure adequate ventilation. Ground and bond containers when transferring material. Use spark-proof tools and explosion-proof equipment. Consult your supplier of promoters and catalysts for additional instructions on proper mixing and usage. Empty containers may retain product residue (liquid and/or vapour). Do not pressurize, cut, weld, braze, solder, drill, grind, or expose these containers to heat, flame, sparks, static electricity, or other sources of ignition as the container may explode and may cause injury or death. Empty drums should be completely drained and properly bunged. Empty drums should be promptly returned to a drum reconditioner or properly disposed.







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Storage

Keep away from heat and sources of ignition. No smoking. Keep away from direct sunlight. Keep containers tightly closed in a cool, well-ventilated place. To ensure maximum stability and maintain optimum resin properties, resins should be stored in closed containers at temperatures below 77°F (25°C).

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Exposure limits

Components with workplace control parameters

Styrene (CAS #: 100-42-5)

ACGIH TLV 20 ppm TWA

40 ppm STEL

A4 Not Classifiable as a Human Carcinogen

OSHA PEL 100 ppm TWA

200 ppm Ceiling

Industry PEL While the federal workplace exposure limit for styrene is 100 ppm, OSHA accepted

the styrene industry's proposal to voluntarily meet a PEL of 50 ppm on an 8 hour TWA

and a Short Term Exposure Limit (STEL) of 100 ppm, 15 minute exposure.

Canada – Alberta OELs 40 ppm STEL

170 mg/m³ STEL 20 ppm TWA 85 mg/m³ TWA

Canada – Ontario OELs 35 ppm TWA

100 ppm STEL 50 ppm TWA

Canada – British Columbia OELs 50 ppm TWA

75 ppm STEL

NIOSH IDLH 700 ppm Immediately dangerous to life or health IDLH

Mexico OEL 100 ppm STEL

425 mg/m³ STEL 50 ppm TWA 215 mg/m³ TWA

(skin)

Silica, Amorphous, Fumed, Cryst.-Free (CAS #: 112945-52-5)

OSHA PEL 20 mppcf, 80 mg/m³/%SiO2 TWA

NIOSH IDLH 3000 mg/m³ – Immediately dangerous to life or health (IDLH)

Legend

TLV® – Threshold Limit Value
TWA – Time-Weighted Average
STEL – Short Term Exposure Limit

IDLH – Immediately Dangerous to Life or Health

ACGIH – American Conference of Governmental Industrial Hygienists

OSHA - Occupational Safety and Health Administration

NIOSH - National Institute for Occupational Safety and Health

OEL – Occupational Exposure Limit PEL – Permissible Exposure Limit

SKIN: Skin Absorption







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Appropriate engineering controls

Engineering Controls

Use general ventilation to maintain airborne concentrations to levels that are below regulatory and recommended occupational exposure limits. Local ventilation may be required during certain operations. Use explosion-proof equipment.

Individual protection measures, such as personal protective equipment

Respiratory Protection

None required if hazards have been assessed and airborne concentrations are maintained below the exposure limits listed in Section 8. Wear an approved air-purifying respirator with organic vapour cartridges and particulate filters where airborne concentrations may exceed exposure limits in Section 8 and/or there is exposure to dust or mists due to sanding, grinding, cutting or spraying. Use and approved positive-pressure air-supplied respirator with emergency escape provisions if there is any potential for an uncontrolled release, airborne concentrations are not known, or any other circumstances where air-purifying respirators may not provide adequate protection.

Eye/Face Protection

Safety glasses with side-shields. If splashes are likely to occur: Tight sealing safety goggles. Ensure that eyewash stations and safety showers are close to the workstation location.

Skin Protection

Wear protective nitrile rubber or Viton™ gloves. Gloves made of nitrile rubber or polyvinyl chloride (PVC) may be used for splash protection and brief or intermittent contact with styrenated polyester resin. Please observe the instructions regarding permeability and breakthrough time which are provided by the supplier of the gloves. Also take into consideration the specific local conditions under which the product is used, such as the danger of cuts, abrasion. Impervious clothing. Rubber or plastic boots.

General Hygiene Considerations

Handle in accordance with good industrial hygiene and safety practice.

9. PHYSICAL AND CHEMICAL PROPERTIES

AppearanceAmber - ClearOdourPungent

Odour Threshold 0.2 ppm (Styrene)

Physical State Liquid

pH No information available

Flash Point 32°C / 89°F
Flash Point Method Seta closed cup

Autoignition Temperature490°C / 914°F (Styrene)Boiling Point/Range146°C / 295°F (Styrene)Melting/Freezing PointNo information available

Flammability Limit in Air

Evaporation Rate < 1 (BuAc = 1)







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Vapour Pressure 5 mmHg @ 20°C (Styrene)

6.7 hPa (Styrene)

Vapour Density3.6 (Air = 1) (Styrene) (Air = 1.0)Explosive PropertiesNo information availableOxidising PropertiesNo information available

Percent Volatile, wt.% 45.0 %

VOC Content 486 g/l (calculated) product as supplied

Viscosity 450 – 650 cps @ 25°C

Partition Coefficient (n-octanol/water) No information available

Decomposition Temperature No information available

10. STABILITY AND REACTIVITY

Reactivity

No dangerous reaction known under conditions of normal use.

Chemical Stability

Stable under normal conditions. Stable under recommended storage conditions.

Possibility of Hazardous Reactions

Hazardous Polymerization

Polymerization can occur. Hazardous polymerization will occur if contaminated with peroxides, metal salts and polymerization catalysts. Product will undergo hazardous polymerization at temperatures above 150°F (65°C).

Conditions to Avoid

Heat, flames and sparks. Contamination by those materials referred to under incompatible materials.

Incompatible Materials

Strong acids. Strong oxidising agents. Metal salts. Polymerization catalysts.

Hazardous Decomposition Products

Hydrocarbons. Carbon monoxide. Carbon dioxide (CO2). Thermal decomposition can lead to release of irritating and toxic gases and vapours.

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Primary Routes of Entry

Eye contact, Ingestion, Inhalation, Skin Contact, Skin absorption

Acute Toxicity

Styrene

Oral LD50 = 5000 mg/kg (Rat)
Dermal LD50 > 2000 mg/kg (Rat)
Inhalation LC50 = 11.8 mg/l (4 H) (Rat)







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Silica, Amorphous, Fumed, Cryst.-Free

Oral LD50 = 3160 mg/kg (Rat)

Information on toxicological effects

Symptoms

Symptoms of overexposure are dizziness, headache, tiredness, nausea, unconsciousness, cessation of breathing.

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Eves

Irritating to eyes.

Skin

Harmful by skin absorption. Contact causes skin irritation. Prolonged skin contact may defat the skin and produce dermatitis.

Inhalation

Harmful by inhalation. May cause irritation of respiratory tract. Inhalation of high vapour concentrations can cause CNS-depression and narcosis.

Ingestion

Harmful if swallowed. Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhoea. Aspiration hazard if swallowed – can enter lungs and cause damage. Ingestion is not an anticipated route of exposure for this material in industrial use.

Sensitization

No information available.

Repeated dose toxicity

In humans, styrene may cause a transient decrease in colour discrimination and effects on hearing. Repeated or prolonged exposure may cause skin irritation and dermatitis, due to defatting properties of the product. May cause damage to the kidneys, liver, eyes, brain, respiratory system, central nervous system through prolonged or repeated exposure if inhaled.

Mutagenic effects

Styrene has given mixed positive and negative results in a number of mutagenicity tests. Styrene was not mutagenic without metabolic activation but gave negative and positive mutagenic results with metabolic activation.

Carcinogenicity

Styrene

ACGIH Group A4 – Not classifiable as a human carcinogen.
 IARC Group 2B – Possibly carcinogenic to humans.
 NTP Reasonably anticipated to be human carcinogen.

Cobalt Compounds

IARC Group 2B – Possibly carcinogenic to humans.

Legend ACGIH – American Conference of Governmental Industrial Hygienists

IARC – International Agency for Research on Cancer

NTP – National Toxicology Program







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Reproductive Toxicity No information available.

Neurological Effects No information available.

STOT – single exposure No information available.

STOT – repeated exposure No information available.

Target organ(s) Liver, Kidney, Central Nervous System (CNS), Respiratory System.

Aspiration Hazard No information available.

Numerical measures of toxicity - Product Information

Unknown acute toxicity 55.1% of the mixture consists of ingredient(s) of unknown toxicity.

The following values are calculated based on chapter 3.1 of the GHS document.

ATEmix (oral) 5094 mg/kg
ATEmix (dermal) 2038 mg/kg
ATEmix (inhalation-vapour) 12 mg/L

12. ECOLOGICAL INFORMATION

Ecotoxicity

Styrene

Log Kow 2.95 Bioconcentration factor (BCF) 74

Algae EC50 = 1.4 mg/L (Pseudokirchneriella subcapitata) (72h)

EC50 0.46 – 4.3 mg/L (Pseudokirchneriella subcapitata) (72h)

Fish LC50 3.24 – 4.99 mg/L (Pimephales promelas) (96h) flow-through

LC50 19.03 – 33.53 mg/L (Lepomis macrochirus) (96h) static LC50 6.75 – 14.5 mg/L (Pimephales promelas) (96h) static LC50 58.75 – 95.32 mg/L (Poecilia reticulata) (96h) static

Water Flea EC50 3.3 – 7.4 mg/L (48h)

Cobalt compounds

Algae EC50 = 0.639 mg/L

Unknown Aquatic Toxicity

55.4% of the mixture consists of component(s) of unknown hazards to the aquatic environment.

Persistence/Degradability No Information available.

Bioaccumulation No information available.

Other adverse effects No information available.







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13. DISPOSAL CONSIDERATIONS

Waste treatment methods

Disposal Considerations

Hazardous waste. Can be incinerated, when in compliance with local regulations.

Contaminated Packaging

Empty containers should be taken for local recycling, recovery or waste disposal.

US EPA Waste Number

D001 (IGNITABLE): When discarded in its purchased form, this material would be regulated under 40 CFR 261.21 as EPA Hazardous Waste Number D001 based on the characteristic of ignitability.

14. TRANSPORT INFORMATION

DOT

UN-No UN1866

Proper Shipping Name RESIN SOLUTION

Hazard Class 3
Packing Group III
NAERG: 127

TDG

UN-No UN1866

Proper Shipping Name RESIN SOLUTION

Hazard Class 3
Packing Group PG III
NAERG: 127

MEX

UN-No UN1866

Proper Shipping Name RESIN SOLUTION

Hazard Class 3
Packing Group PG III
NAERG: 127

<u>IATA</u>

UN-No UN1866

Proper Shipping Name RESIN SOLUTION

Hazard Class 3
Packing Group III
NAERG: 127

IMDG/IMO

UN-No UN1866

Proper Shipping Name RESIN SOLUTION

Hazard Class CLASS 3
Packing Group PG III







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EmS-No F-E, S-E

15. REGULATORY INFORMATION

International Inventories

TSCA Inventory Status:

All components of this material are listed on the US Toxic Substances Control Act (TSCA) Inventory

Canadian Inventory Status:

All components of this material are listed on the Canadian Domestic Substances List (DSL).

Australian Inventory Status:

This product contains only chemicals which are currently listed on the Australian Inventory of Chemical Substances.

Korean Inventory Status:

This product contains only chemicals where are currently listed on the Korean Chemical Substances List.

Philippine Inventory:

This product contains only chemicals that are currently listed on the Philippine Inventory of Chemicals and Chemical Substances.

Japan ENCS:

This product contains only chemicals that are currently listed on the Japanese Inventory of Existing and New Chemical Substances.

Chinese IECS:

This product contains only chemicals that are currently listed on the Chinese Inventory of Existing Chemical Substances.

New Zealand Inventory:

This product contains only chemicals which are currently listed on the New Zealand Inventory of Chemicals.

US Federal Regulations

TSCA 12(b) - Export Notification:

This material does not contain any components that are subject to the US Toxic Substances Control Act (TSCA) Section 12(b) Export Notification requirements.

SARA 313

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product contains a chemical or chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372:

Component	CAS No	Weight-%	SARA 313 Status
Styrene	100-42-5	45.0	Listed
Cobalt compounds		<0.3	Listed







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SARA 311/312 Hazardous Categorization

Acute Health HazardYesChronic Health HazardYesFire HazardYesSudden Release of Pressure HazardNoReactive HazardYes

Clean Water Act

This product contains the following listed substances:

Component	CWA – Reportable Quantities	CWA – Toxic Pollutants	CWA – Priority Pollutants	CWA – Hazardous Substances
Styrene	1000 lb			Listed
100-42-5				

Clean Air Act, Section 112 Hazardous Air Pollutants (HAPs) (see 40 CFR 61)

This product contains the following HAPs:

Component	CAS No	Weight-%	HAPS data
Styrene	100-42-5	45.0	
Cobalt compounds		<0.3	Listed

CERCLA

This product contains the following reportable quantities:

Component	40 CFR 302.4 RQ	40 CFR 355 EHS TPQs
Styrene	1000 lb	
	454 kg	

Chemical Weapons Convention (CWC)

This product does not contain any listed substances.

State Regulations

California Proposition 65

WARNING: This material contains a chemical known to the State of California to cause cancer and birth defects or other reproductive harm. The California Safe Drinking Water and Toxic Enforcement Act of 1986 requires that clear and reasonable warning be given prior to exposing any person to this chemical.

Canada

This product has been classified in accordance with the hazard criteria of the Hazardous Products Regulations (HPR) and the SDS contains all the information required by the HPR.

16. OTHER INFORMATION

NFPA Rating Health 2 Flammability 3 Instability 1

Reference: Reichhold MSDS on Hydrex[®] 100 33350-00 19 February 2015

Compiled by: Aurora Glass Fibre (NZ) Ltd

Preparation Date: 26 March 2019







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THIS INFORMATION IS PROVIDED IN GOOD FAITH AND IS CORRECT TO THE BEST OF AURORA GLASS FIBRE NZ LTD'S KNOWLEDGE AS OF THE DATE HEREOF AND IS DESIGNED TO ASSIST OUR CUSTOMERS; HOWEVER, AURORA GLASS FIBRE NZ LTD MADES NO REPRESENTATION AS TO ITS COMPLETENESS OR ACCURACY. OUR PRODUCTS ARE INTENDED FOR SALE TO INDUSTRIAL AND COMMERCIAL CUSTOMERS. WE REQUIRE CUSTOMERS TO INSPECT AND TEST OUR PRODUCTS BEFORE USE AND TO SATISFY THEMSELVES AS TO SUITABILITY FOR THEIR SPECIFIC APPLICATIONS. ANY USE WHICH AURORA GLASS FIBRE NZ LTD CUSTOMERS OR THIRD PARTIES MAKE OF THIS INFORMATION, OR ANY RELIANCE ON, OR DECISIONS MADE BASED UPON IT, ARE THE RESPONSIBILITY OF SUCH CUSTOMER OR THIRD PARTY. AURORA GLASS FIBRE NZ LTD DISCLAIMS ANY RESPONSIBILITY FOR DAMAGES, OR LIABILITY, OF ANY KIND FROM THE USE OF THIS INFORMATION.