

SAFETY DATA SHEET

FOR INDUSTRIAL USE ONLY

Sylvic(tm) M9

Section 1. Identification

Product name	:	Sylvic(tm) M9
MSDS Number	:	300000003868
Chemical name	:	Not available
Other means of identification	:	Not available
Product type	:	Melamine Urea Formaldehyde Resin
Material uses	:	Wood Adhesives, Composites, Laminates or Related Board Products
Manufacturer/Supplier/Importer	:	Hexion (N.Z.) Limited 165 Totara Street Mt. Maunganui, Tauranga, 3116 New Zealand
Contact person	:	4information@hexion.com
Telephone	:	General information +64 07 547 4130
Emergency telephone number	:	0800 734 607

Section 2. Hazards identification

HSNO Classification	:	3.1 - FLAMMABLE LIQUIDS - Category D 6.5 - SENSITIZATION - Category B (Skin) 6.7 - CARCINOGENICITY - Category A 6.8 - REPRODUCTIVE AND DEVELOPMENTAL TOXICITY - Category B 6.8 - REPRODUCTIVE AND DEVELOPMENTAL TOXICITY - Category B
----------------------------	---	---

This material is classified as hazardous according to criteria in the Hazardous Substances (Minimum Degrees of Hazard) Regulations 2001 and has been classified according to the Hazardous Substances (Classifications) Regulations 2001.

This material is not classified as a dangerous good according to criteria in New Zealand Standard 5433:2007 Transport of Dangerous Goods on Land.

GHS label elements

Signal word	:	Danger
Hazard statements	:	Combustible liquid. May cause an allergic skin reaction. May cause cancer. Suspected of damaging fertility or the unborn child.

Symbol : 

Precautionary statements

- Prevention** : Obtain special instructions before use.
Do not handle until all safety precautions have been read and understood.
Use personal protective equipment as required.
Wear protective gloves.
Wear eye or face protection.
Keep away from flames and hot surfaces.
Avoid breathing vapor.
Contaminated work clothing should not be allowed out of the workplace.
- Response** : **IF ON SKIN:**
Wash with plenty of soap and water.
Wash contaminated clothing before reuse.
IF exposed or concerned:
Get medical attention/advice.
- Storage** : Store locked up.
Store in cool/well-ventilated place.
- Disposal** : Dispose of contents and container in accordance with all local, regional, national and international regulations.
- Other hazards which do not result in classification** : None known.

Section 3. Composition/information on ingredients

Substance/mixture : Mixture
Chemical name : Not available
Other means of identification : Not available

Hazardous ingredient name	% by weight	CAS number
Formaldehyde	>=0.2 - <1	50-00-0
Methanol	>=0.2 - <1	67-56-1
Borax Decahydrate	>=0.1 - <0.2	1303-96-4

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.

Occupational exposure limits, if available, are listed in Section 8.

Section 4. First aid measures

Description of necessary first aid measures

Inhalation : Remove victim to fresh air and keep at rest in a position comfortable

Version: 3.0

Date of issue/Date of revision: 11.09.2015

Date of previous issue: 09.01.2013

for breathing. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

- Ingestion** : Wash out mouth with water. Remove dentures if any. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.
- Skin contact** : Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Wash contaminated clothing thoroughly with water before removing it, or wear gloves. Continue to rinse for at least 10 minutes. Get medical attention. In the event of any complaints or symptoms, avoid further exposure. Wash clothing before reuse. Clean shoes thoroughly before reuse.
- Eye contact** : Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Get medical attention if irritation occurs.

Most important symptoms/effects, acute and delayed

Potential acute health effects

- Inhalation** : No known significant effects or critical hazards.
- Ingestion** : No known significant effects or critical hazards.
- Skin contact** : May cause an allergic skin reaction.
- Eye contact** : No known significant effects or critical hazards.

Over-exposure signs/symptoms

- Inhalation** : Adverse symptoms may include the following:
reduced fetal weight
increase in fetal deaths
skeletal malformations
- Ingestion** : Adverse symptoms may include the following:
reduced fetal weight
increase in fetal deaths
skeletal malformations
- Skin** : Adverse symptoms may include the following:
irritation
redness
reduced fetal weight
increase in fetal deaths
skeletal malformations
- Eyes** : No specific data.

Indication of immediate medical attention and special treatment needed, if necessary

- Specific treatments** : Not available
- Notes to physician** : No specific treatment. Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
- Protection of first aid personnel** : No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wash contaminated clothing thoroughly with water before removing it, or wear gloves.

See toxicological information (Section 11)

Section 5. Fire-fighting measures**Extinguishing media**

- Suitable** : Use dry chemical, CO₂, water spray (fog) or foam.
- Not suitable** : Do not use water jet.
- Specific hazards arising from the chemical** : Combustible liquid. In a fire or if heated, a pressure increase will occur and the container may burst, with the risk of a subsequent explosion. Runoff to sewer may create fire or explosion hazard.
- Hazardous thermal decomposition products** : No specific data.
- Special precautions for fire-fighters** : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. Move containers from fire area if this can be done without risk. Use water spray to keep fire-exposed containers cool.
- Special protective equipment for fire-fighters** : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.
- Remark** : Not available
- Hazchem code** :

Section 6. Accidental release measures

- Personal precautions, protective equipment and emergency procedures** : 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. Shut off all ignition sources. No flares, smoking or flames in hazard area. Avoid breathing vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment (see section 8 of SDS).
- Environmental precautions** : Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

Methods and material for containment and cleaning up

- Small spill** : Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Use spark-proof tools and explosion-proof equipment. Dispose of via a licensed waste disposal contractor.
- Large spill** : Stop leak if without risk. Move containers from spill area. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see section 13 of SDS). Use spark-proof tools and explosion-proof equipment. Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product. Note: see section 1 of SDS for emergency contact information and section 13 of SDS for waste disposal.

Section 7. Handling and storage

- Precautions for safe handling** : Under HSNO regulation this material has an APPROVED HANDLER requirement, please refer to assigned Group Standard for detail Put on appropriate personal protective equipment (see section 8 of SDS). Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. Persons with a history of skin sensitization problems should not be employed in any process in which this product is used. Avoid exposure - obtain special instructions before use. Avoid exposure during pregnancy. Do not get in eyes or on skin or clothing. Do not ingest. Avoid breathing vapor or mist. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Do not enter storage areas and confined spaces unless adequately ventilated. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Store and use away from heat, sparks, open flame or any other ignition source. Use explosion-proof electrical (ventilating, lighting and material handling) equipment. Use only non-sparking tools. Take precautionary measures against electrostatic discharges. To avoid fire or explosion, dissipate static electricity during transfer by grounding and bonding containers and equipment before transferring material. Empty containers retain product residue and can be hazardous. Do not reuse container.
- Conditions for safe storage, including any incompatibilities** : Store in accordance with local regulations. Store in a segregated and approved area. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see section 10 of SDS) and food and drink. Eliminate all ignition sources. Separate from oxidizing materials. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination.

Section 8. Exposure controls/personal protection

Control parameters

Occupational exposure limits

Ingredient name	Exposure limits
Formaldehyde	NZ OSH (1994-01-01) Ceiling 1 ppm NZ OSH (2010-12-01) Time Weighted Average (TWA) 0.5 ppm Time Weighted Average (TWA) 0.33 ppm
Methanol	NZ OSH (2010-09-01) Time Weighted Average (TWA) 262 mg/m ³ 200 ppm Pollutant concentration that should not be exceeded during working hours and which workers are believed to be exposed during a period of 15 minutes maximum, without experiencing: a) irritation. b) chronic or irreversible tissue damage. c) dependent toxic effects of exposure rate. d) Narcosis of sufficient magnitude to increase susceptibility to accidents. e) The reduction of ability to get to safety by their own means. 328 mg/m ³ 250 ppm
Borax Decahydrate	NZ OSH (1994-01-01) Time Weighted Average (TWA) 5 mg/m ³

- Recommended monitoring procedures** : If this product contains ingredients with exposure limits, personal, workplace atmosphere or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment. Reference should be made to appropriate monitoring standards. Reference to national guidance documents for methods for the determination of hazardous substances will also be required.
- Appropriate engineering controls** : Use only with adequate ventilation. Use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits. The engineering controls also need to keep gas, vapor or dust concentrations below any lower explosive limits. Use explosion-proof ventilation equipment.
- Environmental exposure controls** : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

Individual protection measures

- Hygiene measures** : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Contaminated work clothing should not be allowed out of the workplace. Wash

- contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.
- Respiratory protection** : 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.
- Hand protection** : 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. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.
- Eye protection** : 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, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: safety glasses with side-shields.
- Skin protection** : 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.

Section 9. Physical and chemical properties

Appearance

- Physical state** : Liquid
- Color** : Clear to white
- Odor** : Formaldehyde. mild
- Odor threshold** : Not available
- pH** : Approx. 9.7
- Melting point** : Not available
- Boiling point** : Greater than 100 °C (212.00 °F)
- Flash point** : 69 °C (156.20 °F)
- Burning rate** : Not available
- Burning time** : Not available
- Evaporation rate** : Not available
- Flammability (solid, gas)** : Not available
- Lower and upper explosive (flammable) limits** : **Lower:** Not available
Upper: Not available
- Vapor pressure** : Not available
- Vapor density** : Not available
- Relative density** : 1.24 - 1.275
- Solubility** : Not available
- Solubility in water** : Soluble

Partition coefficient: n-octanol/water	:	Not available
Auto-ignition temperature	:	Not available
Decomposition temperature	:	Not available
SADT	:	
Viscosity	:	Dynamic: 3,000 - 7,000 cPs

Kinematic: Not available

Other information

No additional information.

Section 10. Stability and reactivity

Chemical stability	:	The product is stable.
Possibility of hazardous reactions	:	Under normal conditions of storage and use, hazardous reactions will not occur.
Conditions to avoid	:	Avoid all possible sources of ignition (spark or flame). Do not pressurize, cut, weld, braze, solder, drill, grind or expose containers to heat or sources of ignition.
Incompatible materials	:	Reactive or incompatible with the following materials: oxidizing materials
Hazardous decomposition products	:	Under normal conditions of storage and use, hazardous decomposition products should not be produced.

Section 11. Toxicological information

Information on the likely routes of exposure

Inhalation	:	No known significant effects or critical hazards.
Ingestion	:	No known significant effects or critical hazards.
Skin contact	:	May cause an allergic skin reaction.
Eye contact	:	No known significant effects or critical hazards.

Symptoms related to the physical, chemical and toxicological characteristics

Inhalation	:	Adverse symptoms may include the following: reduced fetal weight increase in fetal deaths skeletal malformations
Ingestion	:	Adverse symptoms may include the following: reduced fetal weight increase in fetal deaths skeletal malformations
Skin contact	:	Adverse symptoms may include the following: irritation redness reduced fetal weight increase in fetal deaths skeletal malformations
Eye contact	:	No specific data.

Delayed and immediate effects and also chronic effects from short and long term exposure

Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
Formaldehyde				
	LD50 Oral	Rat	800 mg/kg	-
	LC50 Inhalation	Rat	0.578 mg/l	2 h
	LD50 Dermal	Rabbit	270 mg/kg	-
Methanol				
	LD50 Oral	Rat	5,628 mg/kg	-
Borax Decahydrate				
	LD50 Oral	Rat	2,660 mg/kg	-

Conclusion/Summary : Not available

Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation
Formaldehyde	Skin - Erythema/E schar	Rabbit	2.5	20 hrs	-
	Skin - Edema	Rabbit	3	20 hrs	-
	eyes - Cornea opacity	Mouse	> 3		-

Conclusion/Summary

Skin : Not available
eyes : Not available
Respiratory : Not available

Sensitization**Conclusion/Summary**

Skin : Not available
Respiratory : Not available

Potential chronic health effects

General : No known significant effects or critical hazards.
Inhalation : No known significant effects or critical hazards.
Ingestion : No known significant effects or critical hazards.
Skin contact : Once sensitized, a severe allergic reaction may occur when subsequently exposed to very low levels.
Eye contact : No known significant effects or critical hazards.
Carcinogenicity : May cause cancer. Risk of cancer depends on duration and level of exposure.
Mutagenicity : No known significant effects or critical hazards.
Teratogenicity : Suspected of damaging the unborn child.
Developmental effects : No known significant effects or critical hazards.
Fertility effects : Suspected of damaging fertility.

Chronic toxicity

Conclusion/Summary : Not available

Carcinogenicity

Conclusion/Summary : Not available

Mutagenicity

Conclusion/Summary : Not available

Teratogenicity

Conclusion/Summary : Not available

Reproductive toxicity

Conclusion/Summary : Not available

Specific target organ toxicity

Product/ingredient name	Category	Route of exposure	Target organs
Formaldehyde	Category B	Inhalation (unknown test type) Oral Oral	respiratory tract gastrointestinal tract kidneys
Methanol	Category A	Inhalation (unknown test type) Inhalation (unknown test type) Inhalation (unknown test type)	lungs optic nerve blood system

Aspiration hazard

Not available

Numerical measures of toxicity**Acute toxicity estimates**

Not available

Other information : Not available

Section 12. Ecological information

Ecotoxicity : No known significant effects or critical hazards.

Aquatic and terrestrial toxicity

Product/ingredient name	Result	Species	Exposure
Formaldehyde			
	Acute LC50 6.7 mg/l -	Fish - Striped bass	96 h
	Acute LC50 6.9 mg/l -	Fish - Zebra danio	6 d
	Acute NOEC > 47.9 mg/l -	Fish - Medaka, high-eyes	28 d
	Acute EC50 5.8 mg/l Fresh water	Aquatic invertebrates. Water flea	2 d
	Acute EC50 4.9 mg/l Fresh water	Aquatic plants - Algae	72 h
	Acute EC50 4.3 mg/l Fresh water	Aquatic plants - Algae	48 h

	Acute EC50 19 mg/l -	Micro-organism - Soil organisms	3 h
Methanol			
	Acute EC50 13,000 mg/l Fresh water	Fish - Rainbow trout,donaldson trout	4 d

Conclusion/Summary : Not available

Persistence/degradability

Conclusion/Summary : Not available

Bioaccumulative potential

Product/ingredient name	LogPow	BCF	Potential
Formaldehyde	0.35	< 1	low
Methanol	-0.77	-	low

Mobility in soil

Soil/water partition coefficient (KOC) : Not available

Other adverse effects : No known significant effects or critical hazards.

Section 13. Disposal considerations

Disposal methods : The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Vapor from product residues may create a highly flammable or explosive atmosphere inside the container. Do not cut, weld or grind used containers unless they have been cleaned thoroughly internally. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

Section 14. Transport information

The data provided in this section is for information only and may not be specific to your package size or mode of transport. You will need to apply the appropriate regulations to properly classify your shipment for transportation.

International transport regulations

Regulatory UN/NA **Proper shipping name**

Classes/Packing group

Version: 3.0

Date of issue/Date of revision: 11.09.2015

Date of previous issue: 09.01.2013

information number
NZ Standard Non-regulated
5433: 1999

IMO/IMDG Non-regulated

IATA Non-regulated
(Cargo)

*PG : Packing group

Section 15. Regulatory information

New Zealand Inventory (NZIoC) : All components are listed or exempted.
HSNO Approval Number : HSR002680
HSNO Group Standard : Surface Coatings and Colourants
HSNO Classification : 3.1 - FLAMMABLE LIQUIDS - Category D
 6.5 - SENSITIZATION - Category B (Skin)
 6.7 - CARCINOGENICITY - Category A
 6.8 - REPRODUCTIVE AND DEVELOPMENTAL TOXICITY - Category B
 6.8 - REPRODUCTIVE AND DEVELOPMENTAL TOXICITY - Category B

Australia inventory (AICS) : Not determined.
Safety, health and environmental regulations specific for the product : No known specific national and/or regional regulations applicable to this product (including its ingredients).

International regulations

International lists : Canada inventory All components are listed or exempted.
 Japan inventory Not determined.
 China inventory (IECSC) All components are listed or exempted.
 Korea inventory Not determined.
 Philippines inventory (PICCS) Not determined.
 United States inventory (TSCA 8b) Not determined.
 Taiwan inventory (CSNN) Not determined.

Section 16. Other information

History

Date of printing : 15.02.2017
Date of issue/Date of revision : 11.09.2015
Date of previous issue : 09.01.2013
Version : 3.0
Key to abbreviations : ADG = Australian Dangerous Goods
 ADR = The European Agreement concerning the International Carriage of Dangerous Goods by Road
 ATE = Acute Toxicity Estimate
 BCF = Bioconcentration Factor
 GHS = Globally Harmonized System of Classification and Labelling of Chemicals
 IATA = International Air Transport Association
 IBC = Intermediate Bulk Container
 IMDG = International Maritime Dangerous Goods
 LogPow = logarithm of the octanol/water partition coefficient

MARPOL 73/78 = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution)
RID = The Regulations concerning the International Carriage of Dangerous Goods by Rail
UN = United Nations

References

: Not available

Notice to reader

The information provided herein was believed by Hexion Inc. ("Hexion") to be accurate at the time of preparation or prepared from sources believed to be reliable, but it is the responsibility of the user to investigate and understand other pertinent sources of information, to comply with all laws and procedures applicable to the safe handling and use of the product and to determine the suitability of the product for its intended use. All products supplied by Hexion are subject to Hexion's terms and conditions of sale. HEXION MAKES NO WARRANTY, EXPRESSED OR IMPLIED, CONCERNING THE PRODUCT OR THE MERCHANTABILITY OR FITNESS THEREOF FOR ANY PURPOSE OR CONCERNING THE ACCURACY OF ANY INFORMATION PROVIDED BY HEXION, except that the product shall conform to Hexion's specifications. Nothing contained herein constitutes an offer for the sale of any product.

® and ™ Licensed trademarks of Hexion Inc.