



610, rue Adanac, Quebec (Quebec) G1C 7B7

SAFETY DATA SHEET

Poison control center (Quebec)
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SECTION 1. IDENTIFICATION

Product name : HYDRANAL™-Composite 5

Product Number : HS-0995

Supplier : Laboratoire MAT Inc.
610 Adanac street
Quebec QC G1C 7B7
CANADA
www.labmat.com

Telephone : 418-660-8666
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SECTION 2. HAZARDS IDENTIFICATION

Emergency Overview

Form : liquid

Color : brown

Odor : characteristic

Classification of the substance or mixture

Classification of the substance or mixture : Carcinogenicity, Category 2
Reproductive toxicity, Category 1B
Specific target organ toxicity - repeated exposure, Category 1

GHS Label elements, including precautionary statements

Symbol(s)

:



Signal word

: Danger

Hazard statements

: Suspected of causing cancer.
May damage fertility or the unborn child.
Causes damage to organs through prolonged or repeated exposure.

Precautionary statements

: **Prevention:**
Obtain special instructions before use.
Do not handle until all safety precautions have been read and understood.
Do not breathe dust/ fume/ gas/ mist/ vapours/ spray.
Wash skin thoroughly after handling.
Do not eat, drink or smoke when using this product.
Use personal protective equipment as required.

Response:

IF exposed or concerned: Get medical advice/ attention.

Storage:

Store locked up.

Disposal:

Dispose of contents/ container to an approved waste disposal plant.

Carcinogenicity

IARC: 2-Methylimidazole 693-98-1
Group 2B: Possibly carcinogenic to humans

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical nature

: Mixture

Chemical name	CAS-No.	Concentration
2-(2-Ethoxyethoxy)ethanol	111-90-0	>=70.00 - <90.00 %
Iodine	7553-56-2	>=5.00 - <10.00 %
Imidazole	288-32-4	>=5.00 - <10.00 %
2-Methylimidazole	693-98-1	>=1.00 - <5.00 %
Sulphur dioxide	7446-09-5	>=1.00 - <5.00 %
1H-Imidazole monohydriodide	68007-08-9	>=1.00 - <5.00 %

SECTION 4. FIRST AID MEASURES

General advice	: First aider needs to protect himself. Move out of dangerous area. Take off all contaminated clothing immediately.
Inhalation	: Move to fresh air. Keep patient warm and at rest. Call a physician immediately.
Skin contact	: Wash off immediately with plenty of water. If skin irritation persists, call a physician.
Eye contact	: In the case of contact with eyes, rinse immediately with plenty of water and seek medical advice. Protect unharmed eye.
Ingestion	: When swallowed, allow water to be drunk. Do NOT induce vomiting. Call a physician immediately.

Notes to physician

Most important symptoms/effects, acute and delayed	: No information available.
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Indication of immediate medical attention and special treatment needed, if necessary	: Treat symptomatically.
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SECTION 5. FIREFIGHTING MEASURES

Suitable extinguishing media	: Water spray Foam Carbon dioxide (CO ₂) Dry powder
Unsuitable extinguishing media	: Do not use a solid water stream as it may scatter and spread fire.
Specific hazards during firefighting	: Fire may cause evolution of: Carbon monoxide Carbon dioxide (CO ₂) Sulphur oxides nitrogen oxides (NO _x)
Special protective equipment for firefighters	: Wear an approved positive pressure self-contained breathing apparatus in addition to standard fire fighting gear.
Further information	: Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures	: Evacuate personnel to safe areas. Wear personal protective equipment. Unprotected persons must be kept away. Ensure adequate ventilation. Remove all sources of ignition.
Environmental precautions	: Should not be released into the environment.
Methods and materials for containment and cleaning up	: Ventilate the area. Contain spillage, soak up with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and transfer to a container for disposal according to local /

national regulations (see section 13).

SECTION 7. HANDLING AND STORAGE

Handling

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|---|---|---|
| Precautions for safe handling | : | Wear personal protective equipment.
Use only in well-ventilated areas. |
| Advice on protection against fire and explosion | : | Keep away from sources of ignition - No smoking.
Normal measures for preventive fire protection. |

Storage

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| Conditions for safe storage, including any incompatibilities | : | Keep containers tightly closed in a dry, cool and well-ventilated place.
Store in original container.
Protect from atmospheric moisture and water. |
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SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

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| Protective measures | : | Ensure that eyewash stations and safety showers are close to the workstation location.
Legal requirements are to be considered in regard of the selection, use and care of personal protective equipment.
Avoid exposure - obtain special instructions before use. |
| Engineering measures | : | Use with local exhaust ventilation.
Prevent vapour buildup by providing adequate ventilation during and after use. |
| Eye protection | : | Safety goggles |
| Hand protection | : | Wear nitrile rubber gloves to avoid contact with the skin.
Gloves must be inspected prior to use.
Replace when worn. |
| Skin and body protection | : | Protective suit |
| Respiratory protection | : | In case of insufficient ventilation wear suitable respiratory equipment. |

Hygiene measures : Take off all contaminated clothing immediately.
 Remove and wash contaminated clothing before re-use.
 Wash hands before breaks and at the end of workday.
 When using do not eat or drink.

Exposure Guidelines

Components	CAS-No.	Value	Control parameters	Update	Basis
2-(2-Ethoxyethoxy)ethanol	111-90-0	TWA : Time weighted average	165 mg/m ³ (30 ppm)	12 2007	CAD ON OEL:Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents), as amended
Iodine	7553-56-2	CEILING : Ceiling Limit Value:	1 mg/m ³ (0.1 ppm)	10 2006	CAD AB OEL:Canada. Alberta OELs (Occupational Health & Safety Code, Schedule 1, Table 2), as amended
Iodine	7553-56-2	CEILING : Ceiling Limit Value:	(0.1 ppm)	09 2011	CAD BC OEL:Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended)

Iodine	7553-56-2	STEL : Short term exposure limit	(0.1 ppm)	03 2014	CAD MB OEL:Canada. Manitoba OELs (Reg. 217/2006, The Workplace Safety And Health Act), as amended
Further information	:	Form of exposure : Vapor and aerosol.			

Iodine	7553-56-2	TWA : Time weighted average	(0.01 ppm)	03 2014	CAD MB OEL:Canada. Manitoba OELs (Reg. 217/2006, The Workplace Safety And Health Act), as amended
Further information	:	Form of exposure : Inhalable fraction and vapor.			

Iodine	7553-56-2	TWA : Time weighted average	(0.01 ppm)	11 2010	CAD ON OEL:Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents), as amended
Further information	:	Form of exposure : Inhalable fraction and vapor.			

Iodine	7553-56-2	Ceiling : Ceiling Limit Value:	(0.1 ppm)	05 2009	CAD SK OEL:Canada. Saskatchewan OELs (Occupational Health and Safety Regulations, 1996, Table 21), as amended
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Iodine	7553-56-2	CEILING : Ceiling Limit Value:	1.0 mg/m3 (0.1 ppm)	12 2008	OEL (QUE):Canada. Quebec OELs. (Ministry of Labor - Regulation Respecting the Quality of the Work Environment), as amended
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Iodine	7553-56-2	:	Recirculation prohibited	12 2008	OEL (QUE):Canada. Quebec OELs. (Ministry of Labor - Regulation Respecting the Quality of the Work Environment), as amended
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Iodine	7553-56-2	STEL : Short Term Exposure Limit (STEL):	(0.1 ppm)	06 2015	CAD ON OEL:Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents), as amended
Further information	:	Form of exposure : Vapor and aerosol.			

Sulphur dioxide	7446-09-5	TWA : Time weighted average	5.2 mg/m3 (2 ppm)	10 2006	CAD AB OEL:Canada. Alberta OELs (Occupational Health & Safety Code, Schedule 1, Table 2), as amended
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Sulphur dioxide	7446-09-5	STEL : Short term exposure limit	13 mg/m3 (5 ppm)	10 2006	CAD AB OEL:Canada. Alberta OELs (Occupational Health & Safety Code, Schedule 1, Table 2), as amended
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Sulphur dioxide	7446-09-5	TWA : Time weighted average	(2 ppm)	07 2007	CAD BC OEL:Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended)
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Sulphur dioxide	7446-09-5	STEL : Short term exposure limit	(5 ppm)	07 2007	CAD BC OEL:Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended)
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Sulphur dioxide	7446-09-5	STEL : Short term exposure limit	(0.25 ppm)	03 2011	CAD MB OEL:Canada. Manitoba OELs (Reg. 217/2006, The Workplace Safety And Health Act), as amended
Sulphur dioxide	7446-09-5	TWA : Time weighted average	5.2 mg/m3 (2 ppm)	12 2007	CAD ON OEL:Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents), as amended
Sulphur dioxide	7446-09-5	STEL : Short Term Exposure Limit (STEL):	10.4 mg/m3 (5 ppm)	12 2007	CAD ON OEL:Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents), as amended
Sulphur dioxide	7446-09-5	8 HR ACL : 8 hour average contamin ation limit:	(2 ppm)	05 2009	CAD SK OEL:Canada. Saskatchewan OELs (Occupational Health and Safety Regulations, 1996, Table 21), as amended

Sulphur dioxide	7446-09-5	15 MIN ACL : 15 minute average contamin ation limit:	(5 ppm)	05 2009	CAD SK OEL:Canada. Saskatchewan OELs (Occupational Health and Safety Regulations, 1996, Table 21), as amended
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Sulphur dioxide	7446-09-5	STEL : Short term exposure limit	13 mg/m3 (5 ppm)	12 2008	OEL (QUE):Canada. Quebec OELs. (Ministry of Labor - Regulation Respecting the Quality of the Work Environment), as amended
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Sulphur dioxide	7446-09-5	TWA : Time weighted average	5.2 mg/m3 (2 ppm)	12 2008	OEL (QUE):Canada. Quebec OELs. (Ministry of Labor - Regulation Respecting the Quality of the Work Environment), as amended
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SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state : liquid

Color : brown

Odor : characteristic

Odor threshold : Note: no data available

pH	: Note: no data available
Melting point/range	: Note: no data available
Boiling point/boiling range	: Note: no data available
Flash point	: 210 °F (99 °C)
Evaporation rate	: Note: no data available
Lower explosion limit	: Note: no data available
Upper explosion limit	: Note: no data available
Vapor pressure	: Note: no data available
Vapor density	: Note: no data available
Density	: 1.170 g/cm ³ at 20 °C
Water solubility	: Note: completely miscible
Partition coefficient: n-octanol/water	: Note: no data available
Ignition temperature	: Note: no data available
Decomposition temperature	: Note: No decomposition if used as directed.
Viscosity, dynamic	: Note: no data available
Viscosity, kinematic	: Note: no data available

SECTION 10. STABILITY AND REACTIVITY

Reactivity	: Not classified as a reactivity hazard.
Chemical stability	: Stable under normal conditions.
Possibility of hazardous reactions	: Hazardous polymerisation does not occur.
Conditions to avoid	: Protect from atmospheric moisture and water. Heat, flames and sparks.
Incompatible materials	: Strong oxidizing agents
Hazardous decomposition products	: In case of fire hazardous decomposition products may be produced such as: Carbon monoxide Carbon dioxide (CO ₂) Sulphur oxides nitrogen oxides (NO _x)

SECTION 11. TOXICOLOGICAL INFORMATION

Acute oral toxicity	: LD50: > 2,000 mg/kg Species: Rat Note: The toxicological data mentioned are derived from an analogous product.
Acute inhalation toxicity	: Note: no data available
Acute dermal toxicity	: LD50: > 2,000 mg/kg Species: Rat Note: The toxicological data mentioned are derived from an analogous product.

Skin irritation	: Species: Rabbit Result: No skin irritation Note: The toxicological data mentioned are derived from an analogous product.
Eye irritation	: Species: Rabbit Result: No eye irritation Note: The toxicological data mentioned are derived from an analogous product.
Sensitisation 2-(2-Ethoxyethoxy)ethanol	: Species: Guinea pig Classification: non-sensitizing
2-Methylimidazole	: Mouse local lymph node assay Species: Mouse Result: Did not cause sensitisation on laboratory animals. Method: OECD Test Guideline 429
1H-Imidazole monohydriodide	: Mouse local lymph node assay Species: Mouse Result: Does not cause skin sensitisation. Method: OECD 429
Repeated dose toxicity 1H-Imidazole monohydriodide	: Species: Rat Application Route: Ingestion Exposure time: (28 d) NOEL: 50 mg/kg/d Method: Repeated dose (28 days) toxicity (oral)
Genotoxicity in vitro	: Test Method: Ames test Result: negative Note: The toxicological data mentioned are derived from an analogous product.
Genotoxicity in vivo 2-(2-Ethoxyethoxy)ethanol	: Species: Rat, male Cell type: Liver cells Application Route: Oral

	Method: OECD Test Guideline 486 Result: negative
	: Test Method: Chromosome aberration test Species: Mouse, male Cell type: Bone marrow Application Route: Intraperitoneal injection Method: OECD Test Guideline 474 Result: negative
Imidazole	: Test Method: Micronucleus test Species: Mouse, male and female Cell type: Bone marrow Application Route: Oral Method: OECD Test Guideline 474 Result: negative
Teratogenicity Imidazole	: Species: RatApplication Route: Oral No observed adverse effect level: 60 mg/kg body weight No observed adverse effect level: 60 mg/kg body weight Method: OECD Test Guideline 414 Result: Embryotoxic effects and adverse effects on the offspring were detected.
2-Methylimidazole	: Species: RatApplication Route: Oral No observed adverse effect level: >50 mg/kg body weight No observed adverse effect level: 2 mg/kg body weight Method: OECD Test Guideline 414 Result: Embryotoxic effects and adverse effects on the offspring were detected.

SECTION 12. ECOLOGICAL INFORMATION

Toxicity to fish 2-(2-Ethoxyethoxy)ethanol	: flow-through test LC50: 6,010 mg/l
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	Exposure time: 96 h Species: <i>Ictalurus punctatus</i> (channel catfish) Method: OECD Test Guideline 203
Iodine	: LC50: 1.67 mg/l Exposure time: 96 h Species: <i>Oncorhynchus mykiss</i> (rainbow trout)
Imidazole	: static test LC50: 283.6 mg/l Exposure time: 48 h Species: <i>Leuciscus idus</i> (Golden orfe)
2-Methylimidazole	: static test LC50: 190 mg/l Exposure time: 96 h Species: <i>Leuciscus idus</i> (Golden orfe) Method: DIN 38412
1H-Imidazole monohydriodide	: LC0: >= 100 mg/l Exposure time: 96 h Species: <i>Danio rerio</i> (zebra fish) Method: OECD Test Guideline 203
Toxicity to daphnia and other aquatic invertebrates	
2-(2-Ethoxyethoxy)ethanol	: static test LC50: 1,982 mg/l Exposure time: 48 h Species: <i>Daphnia magna</i> (Water flea) Method: OECD Test Guideline 202
Iodine	: LC50: 0.55 mg/l Exposure time: 48 h Species: <i>Daphnia magna</i> (Water flea)
Imidazole	: static test EC50: 341.5 mg/l Exposure time: 48 h Species: <i>Daphnia magna</i> (Water flea) Method: Directive 67/548/EEC, Annex V, C.2.
2-Methylimidazole	: static test EC50: 225.31 mg/l Exposure time: 48 h

	Species: <i>Daphnia magna</i> (Water flea) Method: Directive 67/548/EEC, Annex V, C.2.
1H-Imidazole monohydriodide	: EC50: 1.4 mg/l Exposure time: 48 h Species: <i>Daphnia magna</i> (Water flea) Method: OECD Test Guideline 202 EC0: 0.46 mg/l Exposure time: 48 h Species: <i>Daphnia magna</i> (Water flea) Method: OECD Test Guideline 202
Toxicity to algae Iodine	: Growth inhibition EC50: 0.13 mg/l Exposure time: 72 h Species: <i>Desmodesmus subspicatus</i> (green algae) Method: OECD Test Guideline 201
Imidazole	: static test EC50: 133 mg/l Exposure time: 72 h Species: <i>Desmodesmus subspicatus</i> (green algae) Method: DIN 38412
2-Methylimidazole	: static test EC50: 256.3 mg/l Exposure time: 72 h Species: <i>Desmodesmus subspicatus</i> (<i>Scenedesmus subspicatus</i>) Method: DIN 38412 static test EC50: 189 mg/l Exposure time: 72 h Species: <i>Desmodesmus subspicatus</i> (<i>Scenedesmus subspicatus</i>) Method: DIN 38412
1H-Imidazole monohydriodide	: Biomass EC50: 8.3 mg/l Exposure time: 72 h Species: <i>scenedesmus subspicatus</i>

Method: OECD Test Guideline 201

Growth rate
EC50: 34 mg/l
Exposure time: 72 h
Species: *scenedesmus subspicatus*
Method: OECD Test Guideline 201

Biomass
NOEC: 1 mg/l
Exposure time: 72 h
Species: *scenedesmus subspicatus*
Method: OECD Test Guideline 201

Biomass
NOEC: 1 mg/l
Exposure time: 72 h
Species: *scenedesmus subspicatus*
Method: OECD Test Guideline 201

Toxicity to bacteria
1H-Imidazole
monohydriodide

: Respiration inhibition
EC50: > 1,000 mg/l
Exposure time: 3 h
Species: activated sludge
Method: OECD 209

Respiration inhibition
NOEC: 320 mg/l
Exposure time: 3 h
Species: activated sludge
Method: OECD 209

Elimination information (persistence and degradability)

Biodegradability : Result: Readily biodegradable.
Value: 78 %
Method: OECD 302 B
Note: Information given is based on data on the components
and the toxicology of similar products.

Further information on ecology

Additional ecological information
Iodine : Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

SECTION 13. DISPOSAL CONSIDERATIONS

Disposal methods : Observe all Federal, State, and Local Environmental regulations.

SECTION 14. TRANSPORT INFORMATION

DOT Not dangerous goods

TDG Not dangerous goods

IATA Not dangerous goods

IMDG Not dangerous goods

SECTION 15. REGULATORY INFORMATION

Inventories

US. Toxic Substances Control Act : All chemical substances in this product are either listed on the TSCA Inventory or are in compliance with a TSCA Inventory exemption.

Australia. Industrial Chemical (Notification and Assessment) Act : On the inventory, or in compliance with the inventory

China. Inventory of Existing Chemical Substances (IECSC) : On the inventory, or in compliance with the inventory

Note : Note: Because of the potential specific inventory listing of components of this product line, further, more detailed information can be requested from SafetyDataSheet@Honeywell.com.

National regulatory information

TSCA : This material must be used in compliance with the TSCA Research and Development Exemption requirements (40 CFR 720.36).

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**WHMIS
Components**

: 2-(2-Ethoxyethoxy)ethanol 111-90-0
: Sulphur dioxide 7446-09-5
: Iodine 7553-56-2

NPRI

Canadian National Pollutant Release Inventory (NPRI): No component is listed on NPRI.

SECTION 16. OTHER INFORMATION

	HMIS III	NFPA
Health hazard	: 2	2
Flammability	: 1	1
Physical Hazard	: 0	
Instability	:	0

Hazard rating and rating systems (e.g. HMIS® III, NFPA): This information is intended solely for the use of individuals trained in the particular system.

Further information

The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. Laboratoire MAT Inc. shall not be held liable for any damage resulting from handling or from contact with the above product.

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