

Amroy Europe Oy, VAT no. FI19869654

HYBTONITE® Fusion Series

RESIN COMPONENT A

HYBTONITE® G4LV nanoepoxy resin

1. IDENTIFICATION OF THE SUBSTANCE / PREPARATION AND COMPANY

Product name	Name of Substance HYBTONITE® G4LV	
Product type	EPOXY RESIN and fillers	
Supplier	Amroy Europe Oy	VAT No. FI19869654
	Hallituskatu 8A	
	FI – 33200 Tampere, FINLAND www.amroy.fi	

Contact numbers/Emergency	Tel. +358 400 815266
	Fax. +358 20 711 8609 (production)

2. COMPOSITION / INFORMATION ON INGREDIENTS

Preparation description: Blend of liquid epoxy resin(s) and fillers

Dangerous components/constituents

CAS Number:

25068-38-6	Bisfenol A and epichlorohydrin reaction result, epoxy resin	50 – 100 %
	Xi, N; R 36/38, R43, R51/53	
28064-14-4	Bisfenol F epichlorohydrin epoxy resin	0 – 40 %
	Xi, N; R43, R51/53	

3. HAZARDS IDENTIFICATION

Xi, N	Irritant, toxic to aquatic environment
R36/38	Irritating to eyes and skin.
R43	May cause sensitization by skin contact.
R51/53	Toxic to aquatic organism. May cause long term adverse effects in the aquatic environment.

4. FIRST AID MEASURES

Symptoms and effects	Irritation of the skin and eyes.
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First Aid:

– inhalation	No specific measures
– skin	Do not delay. Remove contaminated clothing. Wash skin with water using soap if available. If persistent irritation occurs, obtain medical attention.
– eye	Do not delay. Flush eye with water. If persistent irritation occurs, obtain medical attention immediately.
– ingestion	Do not induce vomiting. In the unlikely event of ingestion, obtain medical attention immediately.

Advice to Physicians	If skin sensitisation has developed and a causal relationship has been confirmed, further exposure should not be allowed.
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5. FIRE FIGHTING MEASURES

Special hazards	Not classified as flammable, but will burn. Carbon monoxide may be involved incomplete combustion occurs.
Extinguishing media	
– small fires	Dry chemical powder, carbondioxide foam, water spray or fog, sand or earth
– large fires	Foam, water spray or fog
Unsuitable extinguishing media	Water in a jet
Protective equipment	Full protective clothing and self contained breathing apparatus.
Other information	Keep adjacent containers cool by spraying with water.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions	Avoid contact with skin, eyes and clothing.
Personal protection	Wear protective clothing specified for normal operations (see section 8).
Environmental precautions	Prevent contamination of soil and water. Prevent from spreading or entering into drains, ditches or rivers by using sand, earth or other appropriate barriers. If materials enters drains it should be pumped out into a open vessel. Emergence services may need to be called to assist in this operation.
Clean-up methods	
– small spillage	Absorb or contain liquid with sand, earth or spill control material. Shovel material to labelled sealable container for safe disposal.
– large spillage	Transfer to a labelled container for product recovery or safe disposal. Otherwise treat as for small spillage.

7. HANDLING AND STORAGE

Handling	Avoid contact with skin, eyes and clothing
Storage	Keep container tightly closed and dry. Palletised loads should be stacked to a maximum of 4 high.
Storage temperatures	Ambient.

8. EXPOSURE CONTROLS / personal protection

Occupational exposure standards	None established.
Respiratory protection	Not normally required. In a confined space wear half mask respirator with organic vapour cartridge and build-in particular filter NPF 20 (gas only). If product is applied by spraying wear self contained breathing apparatus.
Hand protection	Nitrile rubber gloves or butyl rubber gloves, gauntlet type.
Eye protection	Monogoggles.
Body protection	Standard issue work clothes, safety boots.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state	Liquid
Colour	clear / dark / green / red
Odour	Slight
Density	1100 – 1200 kg/m ³ at 25 °C (typical)
Dynamic viscosity	1.0 – 8.0 Pa·s at 25 °C
Flash point	Over 200 °C
Solubility in water	Negligible

N-octanol/water partition coefficient	Data not available
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10. STABILITY / REACTIVITY

Stability	Stable under normal use conditions. Reacts with strong oxidising agents. Polymerises exothermically with amines, mercaptens and Lewis acids at ambient temperature and above. Polymerises in contact with bases (e.g. caustic soda), ammonia, primary and secondary amines, alcohol's and acids.
Conditions to avoid Materials to avoid	Caustic soda can induce a vaporous polymerisation at temperatures over 150 °C. Strong oxidising agents. Caustic soda.
Hazardous decomposition products	Hazardous decomposition products are not expected to form during normal storage.

11. TOXICOLOGICAL INFORMATION

Acute toxicity	
– oral	LD50 > 5000 mg/kg
– dermal	LD50 > 5000 mg/kg
Eye irritation	Irritant
Skin irritation	Irritant
Respiratory irritation	Not irritating
Skin sensitisation	Skin sensitiser
Carcinogenicity	A recent review of the available data by the International Agency for Research on Cancer (IARC), has concluded that DGEHPA is not classifiable as to its carcinogenicity.
Mutagenicity	Positive in vitro, but negative in vivo assays.

12. ECOLOGICAL INFORMATION

Basis for assessment	Information given based on data on the components and the ecotoxicology of similar products.
Mobility	Sinks in water
Persistence/degradability	Not readily biodegradable.
Bioaccumulation	Has the potential to bioaccumulate
Acute toxicity	
– fish	Toxic, $1 < LC50 \leq 10$ mg/l.
Sewage treatment	Toxic, $EC50 > 1 - 10$ mg/l, to organisms in sewage treatments plants. Toxic to aquatic organisms.

13. DISPOSAL CONSIDERATIONS

Precautions	See section 8. Refer to section 7 before handling the product or containers.
Waste disposal	Recover or recycle if possible. Otherwise incineration or dispose to licensed contractor.
Product disposal	Drain container thoroughly. Rinse three times with suitable solvent. Treat rinses as for product disposal. After Draining, vent in a safe place away from sparks and re. Send to drum recovered or metal reclaimed.
Local legislation	Control of Pollution Act 1974. Control of Pollution (Special waste) Regulations 1980. Environmental Protection Act 1990.

14. TRANSPORT INFORMATION

Classification / ADR / RID

Name	Environmentally hazardous liquid substance N.O.S (Epoxy resin)
Classification	9
UN Number	3082
Packaging group	3
Classification	Xi, N

IMDG / Sea transport

Name	Environmentally hazardous liquid substance N.O.S (Epoxy resin)
Classification	9
UN Number	3082
Packaging group	3
Kemler code	90
Classification	Xi, N

IATA / Air transport

Name	Environmentally hazardous liquid substance N.O.S (Epoxy resin)
Classification	9
UN Number	3082
Packaging group	3
Classification	Xi, N

15. REGULATORY INFORMATION

Label name	Epoxy resin (Number average, Molecular weight < 700). Hybtonite® G4LV.
Classification & Labelling	Irritant. Dangerous for the environment. Xi, N

Risk phrases	R36/38 Irritating to eyes and skin. R43 May cause sensitisation by skin contact. R51/53 Toxic to aquatic organisms, may cause long-term adverse affects in the aquatic environment.
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Safety phrases	S24 Avoid contact with skin. S26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. S28 After contact with skin, wash immediately with plenty of soap and water. S37/39 Wear suitable gloves and eye/face protection. S61 Avoid release to the environment. Refer to special instructions/Safety data sheets.
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16. OTHER INFORMATION

Uses and restrictions	Compositions for the building and civil engineering industries e.g. flooring compounds, primers, adhesives, mortars, joints and grouts Offshore & Marine applications. Composites.
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MSDS distribution	This document contains important information to ensure the safe storage, handling and use of this product. The information in this document should be brought to the attention of all persons involved with the product.
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DISCLAIMER: This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as a guarantee of any specific property of the product.