



SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Trade name or designation

HumiSeal 1B73EPA PB54

of the mixture

Registration number -

Synonyms None.

Product code HumiSeal Europe 1B73EPA PB54

Issue date 07-July-2015

Version number 0

1.2. Relevant identified uses of the substance or mixture and uses advised against

Identified uses Protective Coating for Printed Circuit Board

Uses advised against None known.

1.3. Details of the supplier of the safety data sheet

Supplier

Company name HUMISEAL EUROPE LTD.

Address 505 Eskdale Road

Winnersh

Wokingham Berkshire RG41 5TU

UK

Division A CHASE CORPORATION COMPANY

Telephone General Assistance 44 (0) 118 944 2333

e-mail europetechsupport@chasecorp.com

Contact person Not available.

1.4. Emergency telephone Chemtrec USA 1-800-424-9300

number

OutSide USA +1 703-741-5970

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

The mixture has been assessed and/or tested for its physical, health and environmental hazards and the following classification applies.

Classification according to Directive 67/548/EEC or 1999/45/EC as amended

Classification F;R11, R67

The full text for all R-phrases is displayed in section 16.

Classification according to Regulation (EC) No 1272/2008 as amended

Physical hazards

Flammable liquids Category 2 H225 - Highly flammable liquid and

vapour.

Health hazards

Serious eye damage/eye irritation Category 2 H319 - Causes serious eye

irritation.

Specific target organ toxicity - single Category 3 narcotic effects H336 - May cause drowsiness or

exposure dizziness.

Hazard summary

Physical hazards Highly flammable.

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SDS UK

Health hazards Vapours may cause drowsiness and dizziness. Occupational exposure to the substance or

mixture may cause adverse health effects.

Environmental hazards Not classified for hazards to the environment.

Specific hazards None known.

Main symptoms May cause drowsiness and dizziness. Headache. Nausea, vomiting. Severe eye irritation.

Symptoms may include stinging, tearing, redness, swelling, and blurred vision.

2.2. Label elements

Label according to Regulation (EC) No. 1272/2008 as amended

Contains: Isopropyl alcohol

Hazard pictograms



Signal word Danger

Hazard statements

H225 Highly flammable liquid and vapour.
H319 Causes serious eye irritation.
H336 May cause drowsiness or dizziness.

Precautionary statements

Prevention

P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

P233 Keep container tightly closed.

P240 Ground/bond container and receiving equipment.

P241 Use explosion-proof electrical/ventilating/lighting equipment.

P242 Use only non-sparking tools.

P243 Take precautionary measures against static discharge.

P261 Avoid breathing mist or vapour.
P264 Wash thoroughly after handling.

P271 Use only outdoors or in a well-ventilated area.

P280 Wear eye protection/face protection.

P280 Wear protective gloves/eye protection/face protection.

Response

P303 + P361 + P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with

water/shower.

P304 + P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.

P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present

and easy to do. Continue rinsing.

P312 Call a PÓISON CENTER/doctor if you feel unwell.
P337 + P313 If eye irritation persists: Get medical advice/attention.
P370 + P378 In case of fire: Use appropriate media to extinguish.

Storage

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

P403 + P235 Store in a well-ventilated place. Keep cool.

P405 Store locked up.

Disposal

P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

Supplemental label information None.

2.3. Other hazards None known.

SECTION 3: Composition/information on ingredients

3.2. Mixtures

General information

Chemical name	%	CAS-No. / EC No.	REACH Registration No.	INDEX No.	Notes
PROPYLENE GLYCOL METHYL ETHER ACETATE	60 - < 70	108-65-6 203-603-9	01-2119475791-29-xxxx	607-195-00-7	#

Classification: DSD: R10

CLP: Flam. Liq. 3;H226

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Chemical name % CAS-No. / EC REACH Registration No. INDEX No. Notes

No.

Isopropyl alcohol 10 - < 20 67-63-0 01-2119457558-25-xxxx 603-117-00-0

200-661-7

Classification: DSD: F;R11, Xi;R36, R67

CLP: Flam. Liq. 2;H225, Eye Irrit. 2;H319, STOT SE 3;H336

Other components below reportable levels 10 - < 20

List of abbreviations and symbols that may be used above

CLP: Regulation No. 1272/2008. DSD: Directive 67/548/EEC.

M: M-factor

vPvB: very persistent and very bioaccumulative substance. PBT: persistent, bioaccumulative and toxic substance.

#: This substance has been assigned Community workplace exposure limit(s).

Composition comments The full text for all R- and H-phrases is displayed in section 16.

SECTION 4: First aid measures

General information Take off all contaminated clothing immediately. Ensure that medical personnel are aware of the

material(s) involved, and take precautions to protect themselves. Wash contaminated clothing

before reuse

4.1. Description of first aid measures

Inhalation Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a POISON

CENTRE or doctor/physician if you feel unwell.

Skin contact Take off immediately all contaminated clothing. Rinse skin with water/shower. Get medical

attention if irritation develops and persists.

Eye contact Immediately flush eyes with plenty of water for at least 15 minutes. Remove contact lenses, if

present and easy to do. Continue rinsing. Get medical attention if irritation develops and persists.

Ingestion Rinse mouth. Get medical attention if symptoms occur.

4.2. Most important symptoms and effects, both acute and

and effects, both acute and delayed

May cause drowsiness and dizziness. Headache. Nausea, vomiting. Severe eye irritation.

Symptoms may include stinging, tearing, redness, swelling, and blurred vision.

4.3. Indication of any immediate medical attention and special treatment needed

Provide general supportive measures and treat symptomatically. Thermal burns: Flush with water immediately. While flushing, remove clothes which do not adhere to affected area. Call an ambulance. Continue flushing during transport to hospital. Keep victim under observation.

Symptoms may be delayed.

SECTION 5: Firefighting measures

General fire hazards Highly flammable liquid and vapour.

5.1. Extinguishing media

Suitable extinguishing

media

Alcohol resistant foam. Water fog. Dry chemical powder. Carbon dioxide (CO2).

Unsuitable extinguishing

media

Do not use water jet as an extinguisher, as this will spread the fire.

5.2. Special hazards arising from the substance or mixture

Vapours may form explosive mixtures with air. Vapours may travel considerable distance to a source of ignition and flash back. During fire, gases hazardous to health may be formed.

5.3. Advice for firefighters

Special protective equipment for firefighters

Self-contained breathing apparatus and full protective clothing must be worn in case of fire.

Special fire fighting procedures

In case of fire and/or explosion do not breathe fumes. Move containers from fire area if you can do

so without risk.

Specific methodsUse standard firefighting procedures and consider the hazards of other involved materials.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

For non-emergency personnel

Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Wear appropriate protective equipment and clothing during clean-up. Avoid breathing mist or vapour. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ventilate closed spaces before entering them. Local authorities should be advised if significant spillages cannot be contained. For personal protection, see section 8.

For emergency responders Keep unnecessary personnel away. Wear appropriate protective equipment and clothing during

clean up. Her personal protection recommended in Section 8 of the SDS

clean-up. Use personal protection recommended in Section 8 of the SDS.

6.2. Environmental precautions

6.3. Methods and material for containment and cleaning up Avoid discharge into drains, water courses or onto the ground.

Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Take precautionary measures against static discharge. Use only non-sparking tools. Keep combustibles (wood, paper, oil etc) away from spilled material. This product is miscible in water.

Large Spills: Stop the flow of material, if this is without risk. Dike the spilled material, where this is possible. Cover with plastic sheet to prevent spreading. Use a non-combustible material like vermiculite, sand or earth to soak up the product and place into a container for later disposal. Following product recovery, flush area with water.

Small Spills: Absorb with earth, sand or other non-combustible material and transfer to containers for later disposal. Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination.

Never return spills to original containers for re-use.

6.4. Reference to other sections

For personal protection, see section 8. For waste disposal, see section 13 of the SDS.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Do not handle, store or open near an open flame, sources of heat or sources of ignition. Protect material from direct sunlight. When using do not smoke. Explosion-proof general and local exhaust ventilation. Take precautionary measures against static discharges. All equipment used when handling the product must be grounded. Use non-sparking tools and explosion-proof equipment. Avoid breathing mist or vapour. Avoid contact with eyes. Avoid prolonged exposure. Wear appropriate personal protective equipment. Observe good industrial hygiene practices.

7.2. Conditions for safe storage, including any incompatibilities

Store locked up. Keep away from heat, sparks and open flame. Prevent electrostatic charge build-up by using common bonding and grounding techniques. Store in a cool, dry place out of direct sunlight. Store in original tightly closed container. Store in a well-ventilated place. Keep in an area equipped with sprinklers. Store away from incompatible materials (see Section 10 of the SDS).

Not available. 7.3. Specific end use(s)

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Occupational exposure limits

UK. EH40 Workplace Exposicomponents	Туре	Value		
Isopropyl alcohol (CAS 67-63-0)	STEL	1250 mg/m3		
		500 ppm		
	TWA	999 mg/m3		
		400 ppm		
PROPYLENE GLYCOL METHYL ETHER ACETATE (CAS 108-65-6)	STEL	548 mg/m3		
		100 ppm		
	TWA	274 mg/m3		
		50 ppm		
FIL Indicative Exposure Lim	uit Values in Directives 91/322/FFC	2000/39/EC, 2006/15/EC, 2009/161/EU		
Components	Type	Value		
PROPYLENE GLYCOL METHYL ETHER ACETATE (CAS 108-65-6)	STEL	550 mg/m3		
		100 ppm		
	TWA	275 mg/m3		
		50 ppm		
logical limit values	No biological exposure limits noted for the ingredient(s).			
commended monitoring cedures	Follow standard monitoring procedures.			
ived no-effect level (DNEL)	Not available.			
dicted no effect centrations (PNECs)	Not available.			

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Exposure guidelines

UK EH40 WEL: Skin designation

PROPYLENE GLYCOL METHYL ETHER ACETATE

Can be absorbed through the skin.

(CAS 108-65-6)

8.2. Exposure controls

Appropriate engineering

Explosion-proof general and local exhaust ventilation. Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level. Provide eyewash station. Eye wash fountain and emergency showers are recommended.

Individual protection measures, such as personal protective equipment

General information Use personal protective equipment as required. Personal protection equipment should be chosen

according to the CEN standards and in discussion with the supplier of the personal protective

equipment.

Eye/face protection

Chemical respirator with organic vapour cartridge and full facepiece.

Skin protection

Wear appropriate chemical resistant gloves. Suitable gloves can be recommended by the glove - Hand protection

supplier.

- Other Wear suitable protective clothing.

Chemical respirator with organic vapour cartridge and full facepiece. Respiratory protection

Thermal hazards Wear appropriate thermal protective clothing, when necessary.

Hygiene measures When using do not smoke. Always observe good personal hygiene measures, such as washing

after handling the material and before eating, drinking, and/or smoking. Routinely wash work

clothing and protective equipment to remove contaminants.

Environmental exposure

controls

Environmental manager must be informed of all major releases.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Appearance

Physical state Liquid. Liquid. **Form** Colour Clear. Odour Aromatic **Odour threshold** Not available. нα Does not apply.

Melting point/freezing point -88.5 °C (-127.3 °F) estimated Initial boiling point and boiling

range

82.5 °C (180.5 °F) estimated

Flash point 12.0 °C (53.6 °F) estimated

Evaporation rate 0.3 BuAc Not applicable. Flammability (solid, gas) Upper/lower flammability or explosive limits

Flammability limit - lower

2.5 % estimated

(%)

Flammability limit - upper

12 % estimated

(%)

17.65 hPa estimated Vapour pressure

Not available. Vapour density Not available. Relative density

Solubility(ies)

Negligible Solubility (water) Solubility (other) Not available. Not available. **Partition coefficient**

(n-octanol/water)

Auto-ignition temperature 399 °C (750.2 °F) estimated

Decomposition temperature Not available.

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Viscosity200 - 260 cPViscosity temperature25 °C (77 °F)Explosive propertiesNot explosiveOxidizing propertiesNot oxidizing

9.2. Other information

Brookfield viscosity 200 - 260 cP
Density 0.96 g/cm3
Miscible (water) Negligible
Percent volatile 80 % v/v
Specific gravity 0.96
VOC (Weight %) 739 g/l

SECTION 10: Stability and reactivity

10.1. ReactivityThe product is stable and non-reactive under normal conditions of use, storage and transport.

10.2. Chemical stability Material is stable under normal conditions.

10.3. Possibility of hazardous

reactions

No dangerous reaction known under conditions of normal use.

10.4. Conditions to avoid Avoid heat, sparks, open flames and other ignition sources. Avoid temperatures exceeding the

flash point. Contact with incompatible materials.

10.5. Incompatible materials

10.6. Hazardous

Acids. Strong oxidising agents. Isocyanates Chlorine. No hazardous decomposition products are known.

decomposition products

SECTION 11: Toxicological information

General information Occupational exposure to the substance or mixture may cause adverse effects.

Information on likely routes of exposure

Inhalation May cause drowsiness and dizziness. Headache. Nausea, vomiting. Prolonged inhalation may be

harmful.

Skin contact No adverse effects due to skin contact are expected.

Eye contact Causes serious eye irritation.

Ingestion May cause discomfort if swallowed. However, ingestion is not likely to be a primary route of

occupational exposure.

Symptoms Headache. May cause drowsiness and dizziness. Nausea, vomiting. Severe eye irritation.

Symptoms may include stinging, tearing, redness, swelling, and blurred vision.

11.1. Information on toxicological effects

Acute toxicity Narcotic effects.

Components	Species	Test results
Isopropyl alcohol (CAS 67-63-0		
<u>Acute</u>		
Dermal		
LD50	Rabbit	12800 mg/kg
Oral		
LD50	Dog	4797 mg/kg
	Mouse	3600 mg/kg
	Rabbit	5.03 g/kg
	Rat	4.7 g/kg

^{*} Estimates for product may be based on additional component data not shown.

Skin corrosion/irritationDue to partial or complete lack of data the classification is not possible.

Serious eye damage/eye

irritation

Causes serious eye irritation.

Respiratory sensitisation

Due to partial or complete lack of data the classification is not possible.

Skin sensitisation

Due to partial or complete lack of data the classification is not possible.

Due to partial or complete lack of data the classification is not possible.

Due to partial or complete lack of data the classification is not possible.

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Due to partial or complete lack of data the classification is not possible.

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Specific target organ toxicity -

single exposure

May cause drowsiness and dizziness.

Specific target organ toxicity -

repeated exposure

Due to partial or complete lack of data the classification is not possible.

Due to partial or complete lack of data the classification is not possible. Aspiration hazard

Mixture versus substance

information

No information available.

Not available. Other information

SECTION 12: Ecological information

12.1. Toxicity The product is not classified as environmentally hazardous. However, this does not exclude the

possibility that large or frequent spills can have a harmful or damaging effect on the environment.

Species Test results Components

Isopropyl alcohol (CAS 67-63-0)

Aquatic

Fish LC50 Bluegill (Lepomis macrochirus) > 1400 mg/l, 96 hours

* Estimates for product may be based on additional component data not shown.

No data is available on the degradability of this product. 12.2. Persistence and

degradability

12.3. Bioaccumulative potential

Partition coefficient n-octanol/water (log Kow)

Isopropyl alcohol 0.05

Not available. **Bioconcentration factor (BCF)** No data available. 12.4. Mobility in soil 12.5. Results of PBT Not available.

and vPvB assessment

12.6. Other adverse effects No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Residual waste Dispose of in accordance with local regulations. Empty containers or liners may retain some

product residues. This material and its container must be disposed of in a safe manner (see:

Disposal instructions).

Since emptied containers may retain product residue, follow label warnings even after container is Contaminated packaging

emptied. Empty containers should be taken to an approved waste handling site for recycling or

disposal.

EU waste code The Waste code should be assigned in discussion between the user, the producer and the waste

disposal company.

Disposal methods/information Collect and reclaim or dispose in sealed containers at licensed waste disposal site. Dispose of

contents/container in accordance with local/regional/national/international regulations.

Special precautions Dispose in accordance with all applicable regulations.

SECTION 14: Transport information

ADR

UN1263 14.1. UN number Paint 14.2. UN proper shipping

name

14.3. Transport hazard class(es)

3 Class Subsidiary risk Label(s) 3 Hazard No. (ADR) 33 D/F **Tunnel restriction code** 14.4. Packing group Ш 14.5. Environmental hazards No.

14.6. Special precautions Read safety instructions, SDS and emergency procedures before handling.

for user

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14.1. UN number UN1263 Paint 14.2. UN proper shipping name 14.3. Transport hazard class(es) Class 3 Subsidiary risk 3 Label(s) 14.4. Packing group Ш 14.5. Environmental hazards No. 14.6. Special precautions Read safety instructions, SDS and emergency procedures before handling. for user **ADN** 14.1. UN number UN1263 14.2. UN proper shipping Paint name 14.3. Transport hazard class(es) 3 Class Subsidiary risk 3 Label(s) Ш 14.4. Packing group 14.5. Environmental hazards No. 14.6. Special precautions Read safety instructions, SDS and emergency procedures before handling. for user IATA 14.1. UN number UN1263 14.2. UN proper shipping **PAINT** name 14.3. Transport hazard class(es) Class 3 Subsidiary risk 14.4. Packing group Ш 14.5. Environmental hazards No. **ERG Code** 3L 14.6. Special precautions Read safety instructions, SDS and emergency procedures before handling. for user Other information Allowed. Passenger and cargo aircraft Allowed. Cargo aircraft only **IMDG** 14.1. UN number UN1263 **PAINT** 14.2. UN proper shipping name 14.3. Transport hazard class(es) Class Subsidiary risk 14.4. Packing group Ш 14.5. Environmental hazards Marine pollutant No. F-E, S-D **EmS** Read safety instructions, SDS and emergency procedures before handling. 14.6. Special precautions for user Not established. 14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC

Code



SECTION 15: Regulatory information

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture EU regulations

Regulation (EC) No. 1005/2009 on substances that deplete the ozone layer, Annex I, as amended

Not listed

Regulation (EC) No. 1005/2009 on substances that deplete the ozone layer, Annex II, as amended Not listed.

Regulation (EC) No. 850/2004 On persistent organic pollutants, Annex I as amended

Not listed

Regulation (EC) No. 689/2008 concerning the export and import of dangerous chemicals, Annex I, part 1 as amended Not listed.

Regulation (EC) No. 689/2008 concerning the export and import of dangerous chemicals, Annex I, part 2 as amended Not listed.

Regulation (EC) No. 689/2008 concerning the export and import of dangerous chemicals, Annex I, part 3 as amended Not listed.

Regulation (EC) No. 689/2008 concerning the export and import of dangerous chemicals, Annex V as amended Not listed.

Regulation (EC) No. 166/2006 Annex II Pollutant Release and Transfer Registry, as amended

Regulation (EC) No. 1907/2006, REACH Article 59(10) Candidate List as currently published by ECHA Not listed.

Authorisations

Regulation (EC) No. 1907/2006, REACH Annex XIV Substances subject to authorization, as amended Not listed.

Regulation (EC) No. 1907/2006, REACH Annex XVII Substances subject to restriction on marketing and use as amended Not listed.

Restrictions on use

Regulation (EC) No. 1907/2006, REACH Annex XVII Substances subject to restriction on marketing and use as amended Isopropyl alcohol (CAS 67-63-0)

Directive 2004/37/EC: on the protection of workers from the risks related to exposure to carcinogens and mutagens at work, as amended

Not listed.

Directive 92/85/EEC: on the safety and health of pregnant workers and workers who have recently given birth or are breastfeeding, as amended

Not listed.

Other EU regulations

Directive 2012/18/EU on major accident hazards involving dangerous substances

Isopropyl alcohol (CAS 67-63-0)

PROPYLENE GLYCOL METHYL ETHER ACETATE (CAS 108-65-6)

Directive 98/24/EC on the protection of the health and safety of workers from the risks related to chemical agents at work, as amended

Isopropyl alcohol (CAS 67-63-0)

PROPYLENE GLYCOL METHYL ETHER ACETATE (CAS 108-65-6)

Directive 94/33/EC on the protection of young people at work, as amended

Not listed.

Other regulations The product is classified and labelled in accordance with EC directives or respective national laws.

This Safety Data Sheet complies with the requirements of Regulation (EC) No 1907/2006.

National regulations Follow national regulation for work with chemical agents.

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No Chemical Safety Assessment has been carried out.

SECTION 16: Other information

List of abbreviations Not available.

References Not available.

Information on evaluation method leading to the classification of mixture

The classification for health and environmental hazards is derived by a combination of calculation methods and test data, if available.

Full text of any statements or R-phrases and H-statements under Sections 2 to 15

R10 Flammable. R11 Highly flammable. R36 Irritating to eyes.

R67 Vapours may cause drowsiness and dizziness.

H225 Highly flammable liquid and vapour. H226 Flammable liquid and vapour. H319 Causes serious eye irritation. H336 May cause drowsiness or dizziness.

Revision information

Training information Follow training instructions when handling this material.

None

Disclaimer

62000 cannot anticipate all conditions under which this information and its product, or the products of other manufacturers in combination with its product, may be used. It is the user's responsibility to ensure safe conditions for handling, storage and disposal of the product, and to assume liability for loss, injury, damage or expense due to improper use. The information offered in this data sheet is designed only as guidance for the safe use, storage and handling of the product. This information is correct to the best of our knowledge and belief at the date of publication, however,

no guarantee is made to its accuracy. This information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any other process. This material is intended for industrial use only. No warranty, expressed or

implied is made.

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