



Safety Data Sheet according to (EC) No 1907/2006

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3321 Adhesive Medical Grade

sds no. : 153595
V006.1

Revision: 21.12.2011
printing date: 18.04.2012

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

Product identifier:

3321 Adhesive Medical Grade

Relevant identified uses of the substance or mixture and uses advised against:

Intended use:
Ultraviolet adhesive

Details of the supplier of the safety data sheet:

Henkel Ireland Limited
Product Safety & Regulatory Affairs
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Dublin 24

Ireland

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24 Hours Emergency Tel: +44 (0)1442 278497

SECTION 2: Hazards identification

Classification of the substance or mixture:

Classification (DPD):

Xn - Harmful
R20/21 Harmful by inhalation and in contact with skin.
Xi - Irritant
R36/37/38 Irritating to eyes, respiratory system and skin.
Dangerous for the environment
R51/53 Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

Label elements (DPD):

Xn - Harmful



N - Dangerous for the environment

**Risk phrases:**

R20/21 Harmful by inhalation and in contact with skin.
 R36/37/38 Irritating to eyes, respiratory system and skin.
 R51/53 Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

Safety phrases:

S26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
 S36/37 Wear suitable protective clothing and gloves.
 S57 Use appropriate container to avoid environmental contamination.
 S60 This material and its container must be disposed of as hazardous waste.

Additional labeling:

For consumer use only: S2 Keep out of the reach of children
 S46 If swallowed, seek medical advice immediately and show this container or label.

Contains:

2-Propenamide, N,N-dimethyl-

Contains 2-Hydroxyethyl acrylate. May produce an allergic reaction.

Other hazards:

None if used properly.

SECTION 3: Composition/information on ingredients**Declaration of the ingredients according to CLP (EC) No 1272/2008:**

Hazardous components CAS-No.	EC Number REACH-Reg No.	content	Classification
Isobornyl acrylate 5888-33-5	227-561-6	30- 40 %	Serious eye irritation 2 H319 Skin irritation 2 H315 Chronic hazards to the aquatic environment 2 H411 Specific target organ toxicity - single exposure 3 H335
2-Hydroxyethyl acrylate 818-61-1	212-454-9	0,1- < 0,2 %	Skin corrosion 1B H314 Acute hazards to the aquatic environment 1 H400 Acute toxicity 3; Dermal H311 Skin sensitizer 1 H317
[3-(2,3- Epoxypropoxy)propyl]trimethoxysilane 2530-83-8	219-784-2 01-2119513212-58	1- 3 %	Serious eye damage/eye irritation 1 H318

**Only dangerous ingredients for which a CLP classification is already available are displayed in this table.
 For full text of the H - statements and other abbreviations see section 16 "Other information".
 Substances without classification may have community workplace exposure limits available.**

Declaration of ingredients according to DPD (EC) No 1999/45:

Hazardous components CAS-No.	EC Number REACH-Reg No.	content	Classification
Isobornyl acrylate 5888-33-5	227-561-6	30 - 40 %	Xi - Irritant; R36/37/38 N - Dangerous for the environment; R51/53
2-Propenamide, N,N-dimethyl- 2680-03-7	220-237-5	10 - 20 %	T - Toxic; R21/22, R23
Ethanone, 2,2-dimethoxy-1,2-diphenyl- 24650-42-8	246-386-6	1 - 5 %	N - Dangerous for the environment; R50/53
Diphenyl-2,4,6-trimethylbenzoyl phosphine oxide 75980-60-8	278-355-8	1 - < 5 %	N - Dangerous for the environment; R51/53 Toxic for reproduction - category 3.; Xn - Harmful; R62
2-Hydroxyethyl acrylate 818-61-1	212-454-9	0,1 - < 0,2 %	T - Toxic; R24 C - Corrosive; R34 R43 N - Dangerous for the environment; R50
[3-(2,3- Epoxypropoxy)propyl]trimethoxysilane 2530-83-8	219-784-2 01-2119513212-58	1 - 3 %	Xi - Irritant; R41

For full text of the R-Phrases indicated by codes see section 16 'Other Information'.
Substances without classification may have community workplace exposure limits available.

SECTION 4: First aid measures**Description of first aid measures:****Inhalation:**

Move to fresh air. If symptoms persist, seek medical advice.
Consideration should be given to the possible effects of a faulty UV source (Stray radiation, ozone).

Skin contact:

Rinse with running water and soap.
In case of adverse health effects seek medical advice.

Eye contact:

Rinse immediately with plenty of running water (for 10 minutes). Seek medical attention if necessary.

Ingestion:

Rinse mouth, drink 1-2 glasses of water, do not induce vomiting, consult a doctor.

Most important symptoms and effects, both acute and delayed:

SKIN: Rash, Urticaria.

Indication of any immediate medical attention and special treatment needed:

See section: Description of first aid measures

SECTION 5: Firefighting measures**Extinguishing media:****Suitable extinguishing media:**

Carbon dioxide, foam, powder

Extinguishing media which must not be used for safety reasons:

None known

Special hazards arising from the substance or mixture:

Oxides of carbon, oxides of nitrogen, irritating organic vapors.

Advice for firefighters:

Wear self-contained breathing apparatus.
Wear protective equipment.

SECTION 6: Accidental release measures

Personal precautions, protective equipment and emergency procedures:

Avoid skin and eye contact.
Ensure adequate ventilation.
Wear protective equipment.

Environmental precautions:

Do not let product enter drains.

Methods and material for containment and cleaning up:

For small spills wipe up with paper towel and place in container for disposal.
For large spills absorb onto inert absorbent material and place in sealed container for disposal.
Wash spillage site thoroughly with soap and water or detergent solution.

Reference to other sections:

See advice in chapter 8

SECTION 7: Handling and storage

Precautions for safe handling:

Ventilation will remove any ozone that may be produced by the ultra violet lamp
Avoid skin and eye contact.

Hygiene measures:

Wash hands before work breaks and after finishing work.
Do not eat, drink or smoke while working.
Good industrial hygiene practices should be observed.

Conditions for safe storage, including any incompatibilities:

Store in original containers at 8-21°C (46.4-69.8°F) and do not return residual materials to containers as contamination may reduce the shelf life of the bulk product.

Specific end use(s):

Ultraviolet adhesive

SECTION 8: Exposure controls/personal protection

Control parameters:

Valid for
Great Britain

Ingredient	ppm	mg/m ³	Type	Category	Remarks
SILICA, AMORPHOUS, RESPIRABLE DUST 112945-52-5		2,4	Time Weighted Average (TWA):		EH40 WEL
SILICA, AMORPHOUS, INHALABLE DUST 112945-52-5		6	Time Weighted Average (TWA):		EH40 WEL

Exposure controls:

Engineering controls:

UV lamp should be designed, installed and operated in such a way as to eliminate exposure of the skin and eyes to stray radiation

Respiratory protection:

Use only in well-ventilated areas.
Ensure adequate ventilation.

Hand protection:

Avoid skin-contact.

The use of chemical resistant gloves such as Nitrile are recommended.

Please note that in practice the working life of chemical resistant gloves may be considerably reduced as a result of many influencing factors (e.g. temperature). Suitable risk assessment should be carried out by the end user. If signs of wear and tear are noticed then the gloves should be replaced.

Eye protection:

Tightly fitting safety goggles

Wear protective glasses.

Skin protection:

Wear suitable protective clothing.

SECTION 9: Physical and chemical properties**Information on basic physical and chemical properties:**

Appearance	liquid Clear
Odor	mild
pH	No data available / Not applicable
Initial boiling point	No data available / Not applicable
Flash point	77,8 °C (172.04 °F)
Decomposition temperature	No data available / Not applicable
Vapour pressure (20 °C (68 °F))	< 6,6600000 mbar
Density ()	1,078 g/cm3
Bulk density	No data available / Not applicable
Viscosity	No data available / Not applicable
Viscosity (kinematic)	No data available / Not applicable
Explosive properties	No data available / Not applicable
Solubility (qualitative) (Solvent: Water)	Slight
Solidification temperature	No data available / Not applicable
Melting point	No data available / Not applicable
Flammability	No data available / Not applicable
Auto-ignition temperature	No data available / Not applicable
Explosive limits	No data available / Not applicable
Partition coefficient: n-octanol/water	No data available / Not applicable
Evaporation rate	No data available / Not applicable
Vapor density	No data available / Not applicable
Oxidising properties	No data available / Not applicable

Other information:

No data available / Not applicable

SECTION 10: Stability and reactivity**Reactivity:**

Reaction with strong bases

Reaction with strong acids.

Chemical stability:

Stable under recommended storage conditions.

Possibility of hazardous reactions:

See section reactivity

Conditions to avoid:

Protect from direct sunlight.

Avoid contact with acids and oxidizing agents.

Incompatible materials:

No data available.

Hazardous decomposition products:

carbon oxides.

SECTION 11: Toxicological information**General toxicological information:**

The preparation is classified based on the conventional method outlined in Article 6(1)(a) of Directive 1999/45/EC. Relevant available health/ecological information for the substances listed under Section 3 is provided in the following.

Oral toxicity:

May cause irritation to the digestive tract.

Ingestion of large quantities may cause liver or kidney damage.

Inhalative toxicity:

Harmful by inhalation.

Irritating to respiratory system

Dermal toxicity:

Harmful in contact with skin.

Skin irritation:

Irritating to the skin.

Eye irritation:

Irritating to eyes.

Acute toxicity:

Hazardous components CAS-No.	Value type	Value	Route of application	Exposure time	Species	Method
[3-(2,3-Epoxypropoxy)propyl]tri methoxysilane 2530-83-8	LD50 LC50 LD50	> 5,3 mg/l	oral inhalation dermal		rat rat rabbit	OECD Guideline 401 (Acute Oral Toxicity) OECD Guideline 403 (Acute Inhalation Toxicity) OECD Guideline 402 (Acute Dermal Toxicity)

Skin corrosion/irritation:

Hazardous components CAS-No.	Result	Exposure time	Species	Method
[3-(2,3-Epoxypropoxy)propyl]tri methoxysilane 2530-83-8	not irritating	24 h	rabbit	OECD Guideline 404 (Acute Dermal Irritation / Corrosion)

Serious eye damage/irritation:

Hazardous components CAS-No.	Result	Exposure time	Species	Method
[3-(2,3-Epoxypropoxy)propyl]tri methoxysilane 2530-83-8	highly irritating		rabbit	OECD Guideline 405 (Acute Eye Irritation / Corrosion)

Respiratory or skin sensitization:

Hazardous components CAS-No.	Result	Test type	Species	Method
[3-(2,3-Epoxypropoxy)propyl]tri methoxysilane 2530-83-8	not sensitising	Buehler test	guinea pig	OECD Guideline 406 (Skin Sensitisation)

Germ cell mutagenicity:

Hazardous components CAS-No.	Result	Type of study / Route of administration	Metabolic activation / Exposure time	Species	Method
[3-(2,3-Epoxypropoxy)propyl]tri methoxysilane 2530-83-8	A Mutagenic potential cannot be excluded.	mammalian cell gene mutation assay	with and without		OECD Guideline 476 (In vitro Mammalian Cell Gene Mutation Test)
[3-(2,3-Epoxypropoxy)propyl]tri methoxysilane 2530-83-8	A Mutagenic potential cannot be excluded.			mouse	OECD Guideline 474 (Mammalian Erythrocyte Micronucleus Test)

Repeated dose toxicity

Hazardous components CAS-No.	Result	Route of application	Exposure time / Frequency of treatment	Species	Method
[3-(2,3-Epoxypropoxy)propyl]tri methoxysilane 2530-83-8	NOAEL=500 mg/kg	oral: unspecified	28 d	rat	OECD Guideline 407 (Repeated Dose 28-Day Oral Toxicity in Rodents)
[3-(2,3-Epoxypropoxy)propyl]tri methoxysilane 2530-83-8	NOAEL=0,225 mg/kg	inhalation	14 d	rat	OECD Guideline 412 (Repeated Dose Inhalation Toxicity: 28/14-Day)

SECTION 12: Ecological information**General ecological information:**

Toxic to aquatic organisms

May cause long-term adverse effects in the aquatic environment.

The preparation is classified based on the conventional method outlined in Article 6(1)(a) of Directive 1999/45/EC. Relevant available health/ecological information for the substances listed under Section 3 is provided in the following.

Mobility:

Cured adhesives are immobile.

Toxicity:

Hazardous components CAS-No.	Value type	Value	Acute Toxicity Study	Exposure time	Species	Method
Isobornyl acrylate 5888-33-5	EC50	1 mg/l	Daphnia	48 h	Daphnia magna	OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test)
Isobornyl acrylate 5888-33-5	IC50	4,2 mg/l	Algae	72 h	Pseudokirchnerella subcapitata	OECD Guideline 201 (Alga, Growth Inhibition Test)
Ethanone, 2,2-dimethoxy-1,2- diphenyl- 24650-42-8	LC50	7,2 mg/l	Fish	96 h	Oncorhynchus mykiss	OECD Guideline 203 (Fish, Acute Toxicity Test)
Ethanone, 2,2-dimethoxy-1,2- diphenyl- 24650-42-8	EC50	26 mg/l	Daphnia	24 h	Daphnia magna	OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test)
Ethanone, 2,2-dimethoxy-1,2- diphenyl- 24650-42-8	EC50	0,17 mg/l	Algae	72 h	Scenedesmus sp.	OECD Guideline 201 (Alga, Growth Inhibition Test)
Diphenyl-2,4,6- trimethylbenzoyl phosphine oxide 75980-60-8	LC50	1 - 10 mg/l	Fish	48 h	Oryzias latipes	OECD Guideline 203 (Fish, Acute Toxicity Test)
Diphenyl-2,4,6- trimethylbenzoyl phosphine oxide 75980-60-8	EC50	10 - 100 mg/l	Daphnia	48 h	Daphnia magna	OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test)
Diphenyl-2,4,6- trimethylbenzoyl phosphine oxide 75980-60-8	EC50	10 - 100 mg/l	Algae	72 h		OECD Guideline 201 (Alga, Growth Inhibition Test)
2-Hydroxyethyl acrylate 818-61-1	LC50	4,8 mg/l	Fish	96 h	Pimephales promelas	OECD Guideline 203 (Fish, Acute Toxicity Test)
2-Hydroxyethyl acrylate 818-61-1	EC50	0,78 mg/l	Daphnia	48 h	Daphnia magna	OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test)
[3-(2,3- Epoxypropoxy)propyl]trimeth oxysilane 2530-83-8	LC50	55 mg/l	Fish	96 h	Cyprinus carpio	OECD Guideline 203 (Fish, Acute Toxicity Test)
[3-(2,3- Epoxypropoxy)propyl]trimeth oxysilane 2530-83-8	EC50	473 mg/l	Daphnia	48 h	Daphnia magna	OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test)
[3-(2,3- Epoxypropoxy)propyl]trimeth oxysilane 2530-83-8	EC50	255 mg/l	Algae	72 h	Scenedesmus subspicatus (new name: Desmodesmus subspicatus)	OECD Guideline 201 (Alga, Growth Inhibition Test)

Persistence and degradability:

Hazardous components CAS-No.	Result	Route of application	Degradability	Method
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Isobornyl acrylate 5888-33-5		no data	72,9 %	OECD Guideline 301 D (Ready Biodegradability: Closed Bottle Test)
Diphenyl-2,4,6-trimethylbenzoyl phosphine oxide 75980-60-8			< 20 %	OECD Guideline 301 F (Ready Biodegradability: Manometric Respirometry Test)
2-Hydroxyethyl acrylate 818-61-1	readily biodegradable	aerobic	> 70 %	OECD Guideline 301 A (new version) (Ready Biodegradability: DOC Die Away Test)
[3-(2,3-Epoxypropoxy)propyl]trimethoxysilane 2530-83-8		aerobic	37 %	OECD Guideline 301 A (new version) (Ready Biodegradability: DOC Die Away Test)

Bioaccumulative potential / Mobility in soil:

Hazardous components CAS-No.	LogKow	Bioconcentration factor (BCF)	Exposure time	Species	Temperature	Method
Isobornyl acrylate 5888-33-5	4,21					OECD Guideline 107 (Partition Coefficient (n-octanol / water), Shake Flask Method)
Ethanone, 2,2-dimethoxy-1,2-diphenyl- 24650-42-8	3,42					
2-Hydroxyethyl acrylate 818-61-1	-0,21					

SECTION 13: Disposal considerations**Waste treatment methods:**

Product disposal:

Dispose of in accordance with local and national regulations.

Disposal of uncleaned packages:

Dispose of in authorised landfill site or incinerate.

Waste code

08 04 09 waste adhesives and sealants containing organic solvents and other dangerous substances

SECTION 14: Transport information**Road transport ADR:**

Class: 9
Packaging group: III
Classification code: M6
Hazard ident. number: 90
UN no.: 3082
Label: 9
Technical name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID,
N.O.S. (2,2-Dimethoxy-1,2-diphenylethan-1-one,Isobornyl acrylate)
Tunnelcode: (E)

Railroad transport RID:

Class: 9
Packaging group: III
Classification code: M6
Hazard ident. number: 90
UN no.: 3082
Label: 9
Technical name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID,
N.O.S. (2,2-Dimethoxy-1,2-diphenylethan-1-one,Isobornyl acrylate)
Tunnelcode:

Inland water transport ADN:

Class: 9
Packaging group: III
Classification code: M6
Hazard ident. number:
UN no.: 3082
Label: 9
Technical name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID,
N.O.S. (2,2-Dimethoxy-1,2-diphenylethan-1-one,Isobornyl acrylate)

Marine transport IMDG:

Class: 9
Packaging group: III
UN no.: 3082
Label: 9
EmS: F-A ,S-F
Seawater pollutant: Marine pollutant
Proper shipping name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID,
N.O.S. (2,2-Dimethoxy-1,2-diphenylethan-1-one,Isobornyl acrylate)

Air transport IATA:

Class: 9
Packaging group: III
Packaging instructions (passenger) 964
Packaging instructions (cargo) 964
UN no.: 3082
Label: 9
Proper shipping name: Environmentally hazardous substance, liquid, n.o.s. (2,2-Dimethoxy-
1,2-diphenylethan-1-one,Isobornyl acrylate)

SECTION 15: Regulatory information

Safety, health and environmental regulations/legislation specific for the substance or mixture:

VOC content < 3,00 %
(1999/13/EC)

SECTION 16: Other information

The labelling of the product is indicated in Section 2. The full text of all abbreviations indicated by codes in this safety data sheet are as follows:

- R21/22 Harmful in contact with skin and if swallowed.
- R23 Toxic by inhalation.
- R24 Toxic in contact with skin.
- R34 Causes burns.
- R36/37/38 Irritating to eyes, respiratory system and skin.
- R41 Risk of serious damage to eyes.
- R43 May cause sensitisation by skin contact.
- R50 Very toxic to aquatic organisms.
- R50/53 Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
- R51/53 Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
- R62 Possible risk of impaired fertility.
- H311 Toxic in contact with skin.
- H314 Causes severe skin burns and eye damage.
- H315 Causes skin irritation.
- H317 May cause an allergic skin reaction.
- H318 Causes serious eye damage.
- H319 Causes serious eye irritation.
- H335 May cause respiratory irritation.
- H400 Very toxic to aquatic life.
- H411 Toxic to aquatic life with long lasting effects.

Further information:

This information is based on our current level of knowledge and relates to the product in the state in which it is delivered. It is intended to describe our products from the point of view of safety requirements and is not intended to guarantee any particular properties.

This safety data sheet was prepared in accordance with Council Directive 67/548/EEC and its subsequent amendments, and Commission Directive 1999/45/EC.