

Delta D77 Nut Grade Adhesive

Product code: D77

Page 1 of 11

SECTION 1: Identification of the substance/mixture and of the company/undertaking**1.1. Product identifier**

D77 Nut Grade Adhesive

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

Adhesives, sealants

Uses advised against

Any non-intended use.

1.3. Details of the supplier of the safety data sheet

Company name: Delta Adhesives Limited
Place: Units 39-40 Claycliffe Business Park, Barnsley, S75 1JU, United Kingdom
Telephone: +44 (0)1226 381571
Internet: www.delta-adhesives.co.uk
Responsible Department: sales@delta-adhesives.co.uk

1.4. Emergency telephone number: +44 (0)1226 381571 (Mo-Fr, 08:00-16:00)

SECTION 2: Hazards identification**2.1. Classification of the substance or mixture**

Indications of danger: Xi - Irritant
R phrases:
Irritating to eyes and respiratory system.
May cause sensitisation by skin contact.
Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

GHS classification

Hazard categories:
Serious eye damage/eye irritation: Eye Irrit. 2
Respiratory/skin sensitization: Skin Sens. 1
Specific target organ toxicity - single exposure: STOT SE 3
Hazardous to the aquatic environment: Aquatic Chronic 3
Hazard Statements:
May cause an allergic skin reaction.
Causes serious eye irritation.
May cause respiratory irritation.
Harmful to aquatic life with long lasting effects.

2.2. Label elements**Hazardous components which must be listed on the label**

Polyglycol dimethacrylate
cumene hydroperoxide, alpha,alpha-dimethylbenzyl hydroperoxide

Signal word: Warning

Pictograms: GHS07

**Hazard statements**

H317 May cause an allergic skin reaction.

Safety Data Sheet

Delta D77 Nut Grade Adhesive

Product code: D77

Page 2 of 11

H319	Causes serious eye irritation.
H335	May cause respiratory irritation.
H412	Harmful to aquatic life with long lasting effects.

Precautionary statements

P273	Avoid release to the environment.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P333+P313	If skin irritation or rash occurs: Get medical advice/attention.
P312	Call a POISON CENTER/doctor if you feel unwell.
P337+P313	If eye irritation persists: Get medical advice/attention.
P501	Dispose of contents/container to in accordance with official regulations.

2.3. Other hazards

No information available.

SECTION 3: Composition/information on ingredients

3.2. Mixtures

Hazardous components

EC No	Chemical name	Quantity
CAS No	Classification	
Index No	GHS classification	
REACH No		
	Polyglycol dimethacrylate	85 - < 90 %
25852-47-5	R43-52-53	
	Skin Sens. 1, Aquatic Chronic 3; H317 H412	
221-950-4	propylidynetrimethyl trimethacrylate	5 - < 10 %
3290-92-4	Xi - Irritant R36/38	
	Eye Irrit. 2, Skin Irrit. 2; H319 H315	
201-254-7	cumene hydroperoxide, alpha,alpha-dimethylbenzyl hydroperoxide	1 - < 5 %
80-15-9	O - Oxidizing, T - Toxic, C - Corrosive, Xn - Harmful, N - Dangerous for the environment R7-23-21/22-48/20/22-34-51-53	
617-002-00-8	Org. Perox. E, Acute Tox. 3, Acute Tox. 4, Acute Tox. 4, STOT RE 2, Skin Corr. 1B, Aquatic Chronic 2; H242 H331 H312 H302 H373 ** H314 H411	
204-055-3	2'-Phenylacetohydrazide	< 1 %
114-83-0	T - Toxic, Xi - Irritant R25-36/37/38-43	
	Acute Tox. 3, Eye Irrit. 2, STOT SE 3, Skin Irrit. 2, Skin Sens. 1; H301 H319 H335 H315 H317	

Full text of R and H phrases: see Section 16.

Further Information

Product does not contain listed SVHC substances.

SECTION 4: First aid measures

4.1. Description of first aid measures

General information

In case of accident or if you feel unwell, seek medical advice immediately (show safety data sheet if possible).

After inhalation

Remove victim to fresh air and keep at rest in a position comfortable for breathing. In case of irritation of the respiratory tract seek medical advice.

Delta D77 Nut Grade Adhesive

Product code: D77

Page 3 of 11

After contact with skin

After contact with skin, wash immediately with plenty of water and soap. If skin irritation or rash occurs: Get medical advice/attention.

After contact with eyes

Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. In case of troubles or persistent symptoms, consult an ophthalmologist.

After ingestion

Rinse mouth immediately and drink large quantities of water. In all cases of doubt, or when symptoms persist, seek medical advice.

4.2. Most important symptoms and effects, both acute and delayed

No information available.

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

Treat symptomatically.

SECTION 5: Firefighting measures**5.1. Extinguishing media****Suitable extinguishing media**

Dry extinguishing powder. Foam. Water spray. Carbon dioxide (CO₂).

Unsuitable extinguishing media

High power water jet.

5.2. Special hazards arising from the substance or mixture

Can be released in case of fire: Carbon monoxide. Carbon dioxide (CO₂). Nitrogen oxides (NO_x).

5.3. Advice for firefighters

Wear a self-contained breathing apparatus and chemical resistant suit. In case of fire and/or explosion do not breathe fumes.

Additional information

Collect contaminated fire extinguishing water separately. Do not allow entering drains or surface water. Use water spray/stream to protect personnel and to cool endangered containers.

SECTION 6: Accidental release measures**6.1. Personal precautions, protective equipment and emergency procedures**

Provide adequate ventilation.

Do not breathe gas/vapour/spray. Avoid contact with skin, eye and clothing.

Wear personal protection equipment. (refer to chapter 8)

6.2. Environmental precautions

Do not empty into drains or the aquatic environment. Prevent spreading over great surfaces (e.g. by damming or installing oil booms). In case of leakage into waters, ground or the drainage system, the appropriate authorities must be informed.

6.3. Methods and material for containment and cleaning up

Absorb with liquid-binding material (e.g. sand, diatomaceous earth, acid- or universal binding agents).

Ventilate affected area.

Treat the assimilated material according to the section on waste disposal.

Clear contaminated area thoroughly.

6.4. Reference to other sections

See protective measures under point 7 and 8.

SECTION 7: Handling and storage**7.1. Precautions for safe handling**

Advice on safe handling

Provide adequate ventilation.
Wear suitable protective clothing. (Refer to chapter 8.)

Advice on protection against fire and explosion

In case of fire and/or explosion do not breathe fumes. Usual measures for fire prevention.

Further information on handling

Do not breathe gas/vapour/spray. Avoid contact with skin, eye and clothing.

7.2. Conditions for safe storage, including any incompatibilities**Requirements for storage rooms and vessels**

Keep container tightly closed in a cool, well-ventilated place. Keep container dry.

Advice on storage compatibility

Do not store together with: Radioactive substances. Infectious substances. Organic peroxides. Oxidizing solids. Oxidizing liquids. Pyrophoric liquids and solids. flammable substances. Substances or mixtures which, in contact with water emit flammable gases. Non-combustible toxic substances.

Further information on storage conditions

Protect against: Light. UV-radiation/sunlight. heat. cooling. moisture.

7.3. Specific end use(s)

No information available.

SECTION 8: Exposure controls/personal protection**8.1. Control parameters****Additional advice on limit values**

To date, no national limit values exist.

8.2. Exposure controls**Appropriate engineering controls**

In case of open handling, use devices with built-in suction where possible. If suction of the immediate vicinity is impossible or insufficient, adequate airing of the working place must be ensured.

Protective and hygiene measures

Always close containers tightly after the removal of product. Do not eat, drink, smoke or sneeze at the workplace. Wash hands before breaks and at the end of work. Remove contaminated clothing immediately and dispose off safely. Wash contaminated clothing prior to re-use. Used working clothes should not be used outside the work area. Street clothing should be stored separately from work clothing.

Eye/face protection

Suitable eye protection: Tightly sealed safety glasses. DIN EN 166

Hand protection

Pull-over gloves of rubber. DIN EN 374

Suitable material:

(Breakthrough time \geq 480 min, penetration time (maximum wearing period): 160 min)

CR (polychloroprenes, Chloroprene rubber). (0,5 mm)

NBR (Nitrile rubber). (0,35 mm)

FKM (fluororubber). (0,4 mm)

PVC (Polyvinyl chloride). (0,5 mm)

Butyl rubber. (0,5 mm)

Before using check leak tightness / impermeability. In case of reutilization, clean gloves before taking

Safety Data Sheet**Delta D77 Nut Grade Adhesive**

Product code: D77

Page 5 of 11

off and store in well-aired place.

In the cases of special applications, it is recommended to check the chemical resistance with the manufacturer of the gloves.

Skin protection

Suitable protection of the body: Lab apron.

Respiratory protection

Respiratory protection required in case of:
insufficient ventilation.

Generation/formation of aerosols

Generation/formation of mist

Suitable respiratory protective equipment: Combination filter device (DIN EN 141).. Type : A / P2/P3

The filter class must be suitable for the maximum contaminant concentration

(gas/vapour/aerosol/particulates) that may arise when handling the product. If the concentration is exceeded, closed-circuit breathing apparatus must be used!

Environmental exposure controls

Do not empty into drains or the aquatic environment.

SECTION 9: Physical and chemical properties**9.1. Information on basic physical and chemical properties**

Physical state:	liquid
Colour:	Blue
Odour:	characteristic

Test method

pH-Value:	not determined
-----------	----------------

Changes in the physical state

Melting point:	not determined
----------------	----------------

Initial boiling point and boiling range:	not determined
--	----------------

Flash point:	not determined
--------------	----------------

Explosive properties

none/none

Lower explosion limits:	not determined
-------------------------	----------------

Upper explosion limits:	not determined
-------------------------	----------------

Oxidizing properties

none/none

Vapour pressure:	not determined
------------------	----------------

Density:	not determined
----------	----------------

Viscosity / dynamic:	not determined
----------------------	----------------

Solvent content:	<2% - Data concerning the Directive 1999/13/EC on the limitation of emissions of volatile organic compounds (VOC-RL)
------------------	--

9.2. Other information

No information available.

SECTION 10: Stability and reactivity**10.1. Reactivity**

No information available.

10.2. Chemical stability

Stable under normal storage and handling conditions.

10.3. Possibility of hazardous reactions

Materials to avoid: Strong acid. Oxidizing agents, strong. Alkalis (alkalis), concentrated.

10.4. Conditions to avoid

Protect against: Light. UV-radiation/sunlight. heat. cooling. moisture.

10.5. Incompatible materials

Materials to avoid: Strong acid. Oxidizing agents, strong. Alkalis (alkalis), concentrated.

10.6. Hazardous decomposition products

Can be released in case of fire: Carbon monoxide. Carbon dioxide (CO₂). Nitrogen oxides (NO_x).

SECTION 11: Toxicological information**11.1. Information on toxicological effects****Toxicokinetics, metabolism and distribution**

No information available.

Acute toxicity

Based on available data, the classification criteria are not met.

Acute toxicity

CAS No	Chemical name	Exposure routes	Method	Dose	Species	Source
3290-92-4	propylidynetrimethyl trimethacrylate	oral	LD50	>2000 mg/kg	Rat.	ECHA Dossier
		dermal	LD50	>2000 mg/kg	Rabbit.	ECHA Dossier
80-15-9	cumene hydroperoxide, alpha,alpha-dimethylbenzyl hydroperoxide	oral	LD50	382 mg/kg	Rat.	IUCLID
		dermal	LD50	500 mg/kg	Rat.	RTECS
		inhalative (4 h) vapour	LC50	(200) mg/l	Mouse.	IUCLID
		inhalative aerosol	ATE	0,5 mg/l		
114-83-0	2'-Phenylacetohydrazide	oral	LD50	270 mg/kg	Mouse.	

Irritation and corrosivity

Causes serious eye irritation.

Sensitising effects

May cause an allergic skin reaction. (Polyglycol dimethacrylate), (2'-Phenylacetohydrazide)

Respiratory or skin sensitisation:

People who suffer from skins problems, asthma, allergies, chronic or recurring respiratory illnesses must not be deployed in processes, which use this substance.

STOT-single exposure

May cause respiratory irritation. (2'-Phenylacetohydrazide)

Severe effects after repeated or prolonged exposure

Based on available data, the classification criteria are not met.

propylidynetrimethyl trimethacrylate:

Chronic oral toxicity (45d, Rat.) NOAEL = >900 mg/kg(bw)/day; literature information: ECHA Dossier

cumene hydroperoxide, alpha,alpha-dimethylbenzyl hydroperoxide:

Subchronic inhalative toxicity (Rat.) NOAEC = 31 mg/m³; literature information: ECHA Dossier

Safety Data Sheet

Delta D77 Nut Grade Adhesive

Product code: D77

Page 7 of 11

Carcinogenic/mutagenic/toxic effects for reproduction

Based on available data, the classification criteria are not met.

propylidynetrimethyl trimethacrylate:

In-vitro mutagenicity:

OECD Guideline 471 (Bacterial Reverse Mutation Assay) = negative. literature information: ECHA Dossier

OECD Guideline 476 (In vitro Mammalian Cell Gene Mutation Test) = negative. literature information: ECHA Dossier

OECD Guideline 473 (In vitro Mammalian Chromosome Aberration Test) = positive (with metabolic activation). = negative (without metabolic activation). literature information: ECHA Dossier

In-vivo mutagenicity:

OECD Guideline 486 (Unscheduled DNA Synthesis (UDS) Test with Mammalian Liver Cells in vivo) = negative. literature information: ECHA Dossier

OECD Guideline 474 (Mammalian Erythrocyte Micronucleus Test) = negative. literature information: ECHA Dossier

Reproductive toxicity: (45d, Rat.) NOAEL = >900 mg/kg(bw)/day; literature information: ECHA Dossier

cumene hydroperoxide, alpha,alpha-dimethylbenzyl hydroperoxide:

In-vitro mutagenicity:OECD Guideline 471 (Bacterial Reverse Mutation Assay) = positive. literature information: ECHA Dossier

No experimental indications of mutagenicity in-vivo exist. literature information: ECHA Dossier

Aspiration hazard

Based on available data, the classification criteria are not met.

Specific effects in experiment on an animal

No information available.

SECTION 12: Ecological information

12.1. Toxicity

CAS No	Chemical name					
	Aquatic toxicity	Method	Dose	[h] [d]	Species	Source
3290-92-4	propylidynetrimethyl trimethacrylate					
	Acute fish toxicity	LC50	2,0 mg/l	96 h	Oncorhynchus mykiss	ECHA Dossier
	Acute algae toxicity	ErC50	3,88 mg/l	72 h	Pseudokirchnerella subcapitata	ECHA Dossier
	Acute crustacea toxicity	EC50	9,22 mg/l	48 h	Daphnia magna	ECHA Dossier
80-15-9	cumene hydroperoxide, alpha,alpha-dimethylbenzyl hydroperoxide					
	Acute fish toxicity	LC50	3,9 mg/l	96 h	Oncorhynchus mykiss	ECHA Dossier
	Acute algae toxicity	ErC50	3,1 mg/l	72 h	Desmodesmus subspicatus	ECHA Dossier
	Acute crustacea toxicity	EC50	18,84 mg/l	48 h	Daphnia magna	ECHA Dossier

12.2. Persistence and degradability

Safety Data Sheet

Delta D77 Nut Grade Adhesive

Product code: D77

Page 8 of 11

CAS No	Chemical name	Method	Value	d	Source
		Evaluation			
3290-92-4	propylidynetrimethyl trimethacrylate				
	OECD Guideline 301 B	53%	28	ECHA Dossier	
	Product is not easily biodegradable.				
80-15-9	cumene hydroperoxide, alpha,alpha-dimethylbenzyl hydroperoxide				
	OECD 301B / ISO 9439 / EWG 92/69 Anhang V, C.4-C	3%	28	ECHA Dossier	
	Not easily bio-degradable (according to OECD-criteria).				

12.3. Bioaccumulative potential

Partition coefficient n-octanol/water

CAS No	Chemical name	Log Pow
3290-92-4	propylidynetrimethyl trimethacrylate	3,53
80-15-9	cumene hydroperoxide, alpha,alpha-dimethylbenzyl hydroperoxide	2,16

12.4. Mobility in soil

No data available

12.5. Results of PBT and vPvB assessment

No data available

12.6. Other adverse effects

No data available

Further information

Do not empty into drains or the aquatic environment.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Advice on disposal

Waste disposal according to official state regulations. Consult the local waste disposal expert about waste disposal. Cleaned containers may be recycled.

Waste disposal number of waste from residues/unused products

080409 WASTES FROM THE MANUFACTURE, FORMULATION, SUPPLY AND USE (MFSU) OF COATINGS (PAINTS, VARNISHES AND VITREOUS ENAMELS), ADHESIVES, SEALANTS AND PRINTING INKS; wastes from MFSU of adhesives and sealants (including waterproofing products); waste adhesives and sealants containing organic solvents or other dangerous substances
Classified as hazardous waste.

Waste disposal number of used product

080409 WASTES FROM THE MANUFACTURE, FORMULATION, SUPPLY AND USE (MFSU) OF COATINGS (PAINTS, VARNISHES AND VITREOUS ENAMELS), ADHESIVES, SEALANTS AND PRINTING INKS; wastes from MFSU of adhesives and sealants (including waterproofing products); waste adhesives and sealants containing organic solvents or other dangerous substances
Classified as hazardous waste.

Waste disposal number of contaminated packaging

150110 WASTE PACKAGING; ABSORBENTS, WIPING CLOTHS, FILTER MATERIALS AND PROTECTIVE CLOTHING NOT OTHERWISE SPECIFIED; packaging (including separately collected municipal packaging waste); packaging containing residues of or contaminated by dangerous substances
Classified as hazardous waste.

Contaminated packaging

Handle contaminated packaging in the same way as the substance itself.

SECTION 14: Transport information**Land transport (ADR/RID)**

14.1. UN number: Not restricted

Other applicable information (land transport)
Not restricted

Inland waterways transport (ADN)

14.1. UN number: Not restricted

Other applicable information (inland waterways transport)
Not restricted

Marine transport (IMDG)

14.1. UN number: Not restricted

Other applicable information (marine transport)
Not restricted

Air transport (ICAO)

14.1. UN number: Not restricted

Other applicable information (air transport)
Not restricted

14.5. Environmental hazards

ENVIRONMENTALLY HAZARDOUS: no

14.6. Special precautions for user

refer to chapter 6-8

14.7. Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code

irrelevant

SECTION 15: Regulatory information**15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture****EU regulatory information**

1999/13/EC (VOC): <2 %; VOC Directive 2004/42/EC: <20 g/l

Additional information

The preparation is dangerous in the sense of Directive 1999/45/EC.
This preparation is hazardous in the sense of regulation (EC) No 1272/2008 [GHS].
Not subject to regulation 96/82/EC.
REACH 1907/2006 Appendix XVII, No 3

National regulatory information

Employment restrictions: Observe employment restrictions for young people.
Water contaminating class (D): 3 - highly water contaminating

15.2. Chemical safety assessment

Chemical safety assessments for substances in this mixture were not carried out.

SECTION 16: Other information**Changes**

Rev. 1,00, 23.10.2014, Initial release

Abbreviations and acronyms

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European

Delta D77 Nut Grade Adhesive

Product code: D77

Page 10 of 11

Agreement concerning the International Carriage of Dangerous Goods by Road)
RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)
IMDG: International Maritime Code for Dangerous Goods
IATA: International Air Transport Association
IATA-DGR: Dangerous Goods Regulations by the "International Air Transport Association" (IATA)
ICAO: International Civil Aviation Organization
ICAO-TI: Technical Instructions by the "International Civil Aviation Organization" (ICAO)
GHS: Globally Harmonized System of Classification and Labelling of Chemicals
EINECS: European Inventory of Existing Commercial Chemical Substances
CAS: Chemical Abstracts Service (division of the American Chemical Society)
LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent
NOAEL: No observed adverse effect level

Full text of R phrases referred to under Sections 2 and 3

07	May cause fire.
21/22	Harmful in contact with skin and if swallowed.
23	Toxic by inhalation.
25	Toxic if swallowed.
34	Causes burns.
36/37	Irritating to eyes and respiratory system.
36/37/38	Irritating to eyes, respiratory system and skin.
36/38	Irritating to eyes and skin.
43	May cause sensitisation by skin contact.
48/20/22	Harmful: danger of serious damage to health by prolonged exposure through inhalation and if swallowed.
51	Toxic to aquatic organisms.
52	Harmful to aquatic organisms.
52/53	Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
53	May cause long-term adverse effects in the aquatic environment.

Full text of H statements referred to under Sections 2 and 3

H242	Heating may cause a fire.
H301	Toxic if swallowed.
H302	Harmful if swallowed.
H312	Harmful in contact with skin.
H314	Causes severe skin burns and eye damage.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H319	Causes serious eye irritation.
H331	Toxic if inhaled.
H335	May cause respiratory irritation.
H373	May cause damage to organs through prolonged or repeated exposure.
H411	Toxic to aquatic life with long lasting effects.
H412	Harmful to aquatic life with long lasting effects.

Further Information

The above information describes exclusively the safety requirements of the product and is based on our present-day knowledge. The information is intended to give you advice about the safe handling of the product named in this safety data sheet, for storage, processing, transport and disposal. The information cannot be transferred to other products. In the case of mixing the product with other products or in the case of processing, the information on this safety data sheet is not necessarily valid for the new made-up material.

Safety Data Sheet

Delta D77 Nut Grade Adhesive

P

Product code: D77

Page 11 of 11

(The data for the hazardous ingredients were taken respectively from the last version of the sub-contractor's safety data sheet.)