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

SDS No. : 41166
V001.0

Assil Expansionsharz

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Replaces version from: -

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

1.1. Product identifier
Assil Expansionsharz (Komp. A)

1.2. Relevant identified uses of the substance or mixture and uses advised against
Intended use:
Expansion adhesive, 2-component without propellant gas

1.3. Details of the supplier of the safety data sheet
Henkel Ltd
Wood Lane End
HP2 4RQ Hemel Hempstead

Great Britain

Phone: +44 1442 278000
Fax-no.: +44 1442 278071

ua-productsafety.uk@henkel.com

1.4. Emergency telephone number
24 Hours Emergency Tel: +44 0 8701 906777 - For further general health & safety, technical and practical advice on this product, please call +44 (0) 1606 593933 or write to: Technical Services; Henkel Limited; Road 5; Winsford Industrial Estate; Winsford; Cheshire; CW7 3QY- Email: technical.services@henkel.co.uk

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification (CLP):

Acute toxicity	Category 4
H332 Harmful if inhaled.	
Route of Exposure: Inhalation	
Skin irritation	Category 2
H315 Causes skin irritation.	
Serious eye irritation	Category 2
H319 Causes serious eye irritation.	
Respiratory sensitizer	Category 1
H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.	
Skin sensitizer	Category 1
H317 May cause an allergic skin reaction.	
Carcinogenicity	Category 2
H351 Suspected of causing cancer.	
Specific target organ toxicity - single exposure	Category 3
H335 May cause respiratory irritation.	
Target organ: respiratory tract irritation	
Specific target organ toxicity - repeated exposure	Category 2
H373 May cause damage to organs through prolonged or repeated exposure.	

2.2. Label elements

Label elements (CLP):

Hazard pictogram:

Contains Diphenylmethane diisocyanate, isomers and homologues

Signal word: Danger

Hazard statement:
H315 Causes skin irritation.
H317 May cause an allergic skin reaction.
H319 Causes serious eye irritation.
H332 Harmful if inhaled.
H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H335 May cause respiratory irritation.
H351 Suspected of causing cancer.
H373 May cause damage to organs through prolonged or repeated exposure.

Precautionary statement:
P101 If medical advice is needed, have product container or label at hand.
P102 Keep out of reach of children.

Precautionary statement: Prevention
P260 Do not breathe mist/vapours.
P271 Use only outdoors or in a well-ventilated area.
P280 Wear protective gloves/eye protection.

Precautionary statement: Response
P302+P352 IF ON SKIN: Wash with plenty of soap and water.
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.
P308+P313 IF exposed or concerned: Get medical advice/attention.

Precautionary statement: Storage
P405 Store locked up.

Precautionary statement: Disposal
P501 Dispose of contents/container in accordance with national regulation.

2.3. Other hazards

Information according to XVII. 56 REACH
Persons already sensitised to diisocyanates may develop allergic reactions when using this product. Persons suffering from asthma, eczema or skin problems should avoid contact, including dermal contact, with this product. This product should not be used under conditions of poor ventilation unless a protective mask with an appropriate gas filter (i.e. type A1 according to standard EN 14387) is used.
Solvents contained in the product evaporate during processing and their vapors can form explosive/highly inflammable air/vapor mixtures.
Pregnant women should absolutely avoid inhalation and skin contact.
Not fulfilling Persistent, Bioaccumulative and Toxic (PBT), very Persistent and very Bioaccumulative (vPvB) criteria.

SECTION 3: Composition/information on ingredients

3.2. Mixtures

General chemical description:
Hardening component of a 2-component PU adhesive
Base substances of preparation:
4,4'-Methylenediphenyl diisocyanate (MDI)

Declaration of the ingredients according to CLP (EC) No 1272/2008:

Hazardous components CAS-No.	EC Number REACH-Reg No.	content	Classification
4,4'- methylenediphenyl diisocyanate 101-68-8	202-966-0 01-2119457014-47	40- 60 %	Carc. 2 H351 Acute Tox. 4; Inhalation H332 STOT RE 2 H373 Eye Irrit. 2 H319 STOT SE 3 H335 Skin Irrit. 2 H315 Resp. Sens. 1 H334 Skin Sens. 1B H317
Diphenylmethane diisocyanate, isomers and homologues 9016-87-9		20- 40 %	Carc. 2 H351 Acute Tox. 4; Inhalation H332 STOT RE 2 H373 Eye Irrit. 2 H319 STOT SE 3 H335 Skin Irrit. 2 H315 Resp. Sens. 1 H334 Skin Sens. 1 H317
o-(p-Isocyanatobenzyl)phenyl isocyanate 5873-54-1	227-534-9 01-2119480143-45	20- 40 %	STOT RE 2 H373 Carc. 2 H351 Acute Tox. 4; Inhalation H332 Eye Irrit. 2 H319 STOT SE 3 H335 Skin Irrit. 2 H315 Skin Sens. 1 H317 Resp. Sens. 1 H334

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.

SECTION 4: First aid measures

4.1. Description of first aid measures

General information:
In case of adverse health effects seek medical advice.

Inhalation:
Move to fresh air, consult doctor if complaint persists.
Delayed effects possible after inhalation.

Skin contact:
Fresh foam : Wipe off affected skin area immediately with a soft cloth and then remove residues with vegetable oil; apply skin care product. Cured foam can be removed only mechanically.

Eye contact:
Immediately flush eyes with soft jet of water or eye rinse solution for at least 5 minutes. If pains remain (intensive smarting, sensitivity to light, visual disturbance) continue flushing and contact/seek doctor or hospital.

Ingestion:
Rinse mouth, do not induce vomiting, consult a doctor.

4.2. Most important symptoms and effects, both acute and delayed
SKIN: Redness, inflammation.

RESPIRATORY: Irritation, coughing, shortness of breath, chest tightness.

May cause an allergic skin reaction.

Causes serious eye irritation.

4.3. Indication of any immediate medical attention and special treatment needed
See section: Description of first aid measures

SECTION 5: Firefighting measures

5.1. Extinguishing media
Suitable extinguishing media:
carbon dioxide, foam, powder, water spray jet, fine water spray

Extinguishing media which must not be used for safety reasons:
High pressure waterjet

5.2. Special hazards arising from the substance or mixture
In the event of fire, isocyanate vapors may be formed.
In the event of a fire, carbon monoxide (CO), carbon dioxide (CO2) and nitrogen oxides (NOx) can be released.

5.3. Advice for firefighters
Wear self-contained breathing apparatus.
Wear protective equipment.

Additional information:
Cool endangered containers with water spray jet.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures
Wear protective equipment.
Danger of slipping on spilled product.
Ensure adequate ventilation.
Avoid contact with skin and eyes.

6.2. Environmental precautions
Do not empty into drains / surface water / ground water.

6.3. Methods and material for containment and cleaning up
Remove with liquid-absorbing material (sand, peat, sawdust).
Dispose of contaminated material as waste according to Section 13.

6.4. Reference to other sections
See advice in section 8

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Ventilate working rooms thoroughly. Avoid naked flames, sparking and sources of ignition. Switch off electrical devices. Do not smoke, do not weld. Do not empty waste into waste water drains.

During processing and drying after adhesion, ventilate well. Avoid all sources of fire such as stoves and ovens. Switch off all electrical devices such as parabolic heaters, hot plates, storage heaters etc. in good time for them to have cooled down before commencing work. Avoid all sparks, including those occurring at electrical switches and devices.

Avoid skin and eye contact.

Hygiene measures:

Do not eat, drink or smoke while working.

Wash hands before work breaks and after finishing work.

Remove any dirt that gets onto the skin with vegetable oil; skin care.

7.2. Conditions for safe storage, including any incompatibilities
Store in sealed original container.
Frost-sensitive
Store in a cool, dry place.
Avoid strictly temperatures below + 2°C and above + 30 °C.
Do not store together with food or other consumables (coffee, tea, tobacco, etc.).
Do not store together with oxidants.
Do not store together with flammable solutions.

7.3. Specific end use(s)
Expansion adhesive, 2-component without propellant gas

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Occupational Exposure Limits

Valid for
Great Britain

Ingredient [Regulated substance]	ppm	mg/m³	Value type	Short term exposure limit category / Remarks	Regulatory list
4,4'-Methylenediphenyl diisocyanate 101-68-8 [ISOCYANATES, ALL (AS -NCO)]		0,07	Short Term Exposure Limit (STEL):		EH40 WEL
4,4'-Methylenediphenyl diisocyanate 101-68-8 [ISOCYANATES, ALL (AS -NCO)]		0,02	Time Weighted Average (TWA):		EH40 WEL
Diphenylmethane diisocyanate, isomers and homologs 9016-87-9 [ISOCYANATES, ALL (AS -NCO)]		0,07	Short Term Exposure Limit (STEL):		EH40 WEL
Diphenylmethane diisocyanate, isomers and homologs 9016-87-9 [ISOCYANATES, ALL (AS -NCO)]		0,02	Time Weighted Average (TWA):		EH40 WEL
o-(p-Isocyanatobenzyl)phenyl isocyanate 5873-54-1 [ISOCYANATES, ALL (AS -NCO)]		0,07	Short Term Exposure Limit (STEL):		EH40 WEL
o-(p-Isocyanatobenzyl)phenyl isocyanate 5873-54-1 [ISOCYANATES, ALL (AS -NCO)]		0,02	Time Weighted Average (TWA):		EH40 WEL

Occupational Exposure Limits

Valid for
Ireland

Ingredient [Regulated substance]	ppm	mg/m³	Value type	Short term exposure limit category / Remarks	Regulatory list
4,4'-Methylenediphenyl diisocyanate 101-68-8 [4,4'-METHYLENE-DIPHENYL DIISOCYANATE (AS -NCO)]	0,005		Time Weighted Average (TWA):		IR_OEL
Diphenylmethane diisocyanate, isomers and homologs 9016-87-9 [ISOCYANATES (ALL, AS -NCO)]		0,02	Time Weighted Average (TWA):		IR_OEL
Diphenylmethane diisocyanate, isomers and homologs 9016-87-9 [ISOCYANATES (ALL, AS -NCO)]		0,07	Short Term Exposure Limit (STEL):	15 minutes	IR_OEL
o-(p-Isocyanatobenzyl)phenyl isocyanate 5873-54-1 [ISOCYANATES (ALL, AS -NCO)]		0,02	Time Weighted Average (TWA):		IR_OEL
o-(p-Isocyanatobenzyl)phenyl isocyanate 5873-54-1 [ISOCYANATES (ALL, AS -NCO)]		0,07	Short Term Exposure Limit (STEL):	15 minutes	IR_OEL

Predicted No-Effect Concentration (PNEC):

Name on list	Environmental Compartment	Exposure period	Value				Remarks
			mg/l	ppm	mg/kg	others	
4,4'- methylenediphenyl diisocyanate 101-68-8	aqua (freshwater)		1 mg/l				
4,4'- methylenediphenyl diisocyanate 101-68-8	aqua (marine water)		0,1 mg/l				
4,4'- methylenediphenyl diisocyanate 101-68-8	Soil				1 mg/kg		
4,4'- methylenediphenyl diisocyanate 101-68-8	sewage treatment plant (STP)		1 mg/l				
4,4'- methylenediphenyl diisocyanate 101-68-8	Air						
4,4'- methylenediphenyl diisocyanate 101-68-8	Predator						
4,4'- methylenediphenyl diisocyanate 101-68-8	aqua (intermittent releases)		10 mg/l				
o-(p-Isocyanatobenzyl)phenyl isocyanate 5873-54-1	aqua (marine water)		0,1 mg/l				
o-(p-Isocyanatobenzyl)phenyl isocyanate 5873-54-1	sewage treatment plant (STP)		1 mg/l				
o-(p-Isocyanatobenzyl)phenyl isocyanate 5873-54-1	aqua (intermittent releases)		10 mg/l				
o-(p-Isocyanatobenzyl)phenyl isocyanate 5873-54-1	aqua (freshwater)		1 mg/l				
o-(p-Isocyanatobenzyl)phenyl isocyanate 5873-54-1	Soil				1 mg/kg		

Derived No-Effect Level (DNEL):

Name on list	Application Area	Route of Exposure	Health Effect	Exposure Time	Value	Remarks
4,4'- methylenediphenyl diisocyanate 101-68-8	Workers	inhalation	Long term exposure - local effects		0,05 mg/m3	
4,4'- methylenediphenyl diisocyanate 101-68-8	Workers	inhalation	Acute/short term exposure - local effects		0,1 mg/m3	
4,4'- methylenediphenyl diisocyanate 101-68-8	General population	inhalation	Long term exposure - local effects		0,025 mg/m3	
4,4'- methylenediphenyl diisocyanate 101-68-8	General population	inhalation	Acute/short term exposure - local effects		0,05 mg/m3	
o-(p-Isocyanatobenzyl)phenyl isocyanate 5873-54-1	Workers	inhalation	Acute/short term exposure - local effects		0,1 mg/m3	
o-(p-Isocyanatobenzyl)phenyl isocyanate 5873-54-1	Workers	inhalation	Long term exposure - local effects		0,05 mg/m3	
o-(p-Isocyanatobenzyl)phenyl isocyanate 5873-54-1	General population	inhalation	Acute/short term exposure - local effects		0,05 mg/m3	
o-(p-Isocyanatobenzyl)phenyl isocyanate 5873-54-1	General population	inhalation	Long term exposure - local effects		0,025 mg/m3	
o-(p-Isocyanatobenzyl)phenyl isocyanate 5873-54-1	Workers	inhalation	Long term exposure - systemic effects		0,05 mg/m3	
o-(p-Isocyanatobenzyl)phenyl isocyanate 5873-54-1	Workers	inhalation	Acute/short term exposure - systemic effects		0,1 mg/m3	
o-(p-Isocyanatobenzyl)phenyl isocyanate 5873-54-1	Workers	dermal	Acute/short term exposure - systemic effects		50 mg/kg	
o-(p-Isocyanatobenzyl)phenyl isocyanate 5873-54-1	Workers	dermal	Acute/short term exposure - local effects		28,7 mg/cm2	
o-(p-Isocyanatobenzyl)phenyl isocyanate 5873-54-1	General population	inhalation	Long term exposure - systemic effects		0,025 mg/m3	
o-(p-Isocyanatobenzyl)phenyl isocyanate 5873-54-1	General population	inhalation	Acute/short term exposure - systemic effects		0,05 mg/m3	
o-(p-Isocyanatobenzyl)phenyl isocyanate 5873-54-1	General population	dermal	Acute/short term exposure - systemic effects		25 mg/kg	
o-(p-Isocyanatobenzyl)phenyl isocyanate 5873-54-1	General population	dermal	Acute/short term exposure - local effects		17,2 mg/cm2	
o-(p-Isocyanatobenzyl)phenyl isocyanate 5873-54-1	General population	oral	Acute/short term exposure - systemic effects		20 mg/kg	

Biological Exposure Indices:

Ingredient [Regulated substance]	Parameters	Biological specimen	Sampling time	Conc.	Basis of biol. exposure index	Remark	Additional Information
4,4'-Methylenediphenyl diisocyanate 101-68-8 [ISOCYANATES (APPLIES TO HDI, IPDI, TDI AND MDI)]	Isocyanate-derived diamine	Creatinine in urine	Sampling time: At the end of the period of exposure.		UKEH40BMGV		
Diphenylmethane diisocyanate, isomers and homologs 9016-87-9 [ISOCYANATES (APPLIES TO HDI, IPDI, TDI AND MDI)]	Isocyanate-derived diamine	Creatinine in urine	Sampling time: At the end of the period of exposure.		UKEH40BMGV		
o-(p-Isocyanatobenzyl)phenyl isocyanate 5873-54-1 [ISOCYANATES (APPLIES TO HDI, IPDI, TDI AND MDI)]	Isocyanate-derived diamine	Creatinine in urine	Sampling time: At the end of the period of exposure.		UKEH40BMGV		

8.2. Exposure controls:

Respiratory protection:
Suitable breathing mask when there is inadequate ventilation.
Combination filter: ABEKP (EN 14387)
This recommendation should be matched to local conditions.

Hand protection:
Recommended are gloves made from Nitril rubber (Material thickness >0,1 mm, Perforation time < 30s).Gloves should be replaced after each short time contact or contamination. Available at laboratory specialized trade or at pharmacies / chemist's shops.
In the case of longer contact protective gloves made from nitrile rubber are recommended according to EN 374.
material thickness > 0.4 mm
Perforation time > 480 minutes
In the case of longer and repeated contact please note that in practice the penetration times may be considerably shorter than those determined according to EN 374. The protective gloves must always be checked for their suitability for use at the specific workplace (e.g. mechanical and thermal stress, product compatibility, antistatic effects, etc.). The gloves must be replaced immediately at the first signs of wear and tear. The information provided by the manufacturers and given in the relevant trade association regulations for industrial safety must always be observed. We recommend that a hand care plan is drawn up in cooperation with a glove manufacturer and the trade association in accordance with the local operating conditions.

Eye protection:
Goggles which can be tightly sealed.
Protective eye equipment should conform to EN166.

Skin protection:
Suitable protective clothing
Protective clothing should conform to EN 14605 for liquid splashes or to EN 13982 for dusts.

Advices to personal protection equipment:
The information provided on personal protective equipment is for guidance purposes only. A full risk assessment should be conducted prior to using this product to determine the appropriate personal protective equipment to suit local conditions. Personal protective equipment should conform to the relevant EN standard.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Appearance	liquid free-flowing brownish
Odor	neutral
Odour threshold	No data available / Not applicable
pH	No data available / Not applicable
Melting point	No data available / Not applicable
Solidification temperature	No data available / Not applicable

Initial boiling point	No data available / Not applicable
Flash point	No data available / Not applicable
Evaporation rate	No data available / Not applicable
Flammability	No data available / Not applicable
Explosive limits	No data available / Not applicable
Vapour pressure	No data available / Not applicable
Relative vapour density:	No data available / Not applicable
Density (20 °C (68 °F))	1,22 - 1,26 g/cm3
Bulk density	No data available / Not applicable
Solubility	No data available / Not applicable
Solubility (qualitative) (23 °C (73.4 °F))	Reacts slowly with water to liberate carbon dioxide gas.
Partition coefficient: n-octanol/water	No data available / Not applicable
Auto-ignition temperature	No data available / Not applicable
Decomposition temperature	No data available / Not applicable
Viscosity (Brookfield; 20 °C (68 °F))	200 - 300 mPa.s
Viscosity (kinematic)	No data available / Not applicable
Explosive properties	No data available / Not applicable
Oxidising properties	No data available / Not applicable

9.2. Other information

No data available / Not applicable

SECTION 10: Stability and reactivity

10.1. Reactivity
Reaction with water, alcohols, amines.
Reaction with water, formation of CO2
Pressure build-up in closed containers.

10.2. Chemical stability
Stable under recommended storage conditions.

10.3. Possibility of hazardous reactions
See section reactivity

10.4. Conditions to avoid
Humidity

10.5. Incompatible materials
See section reactivity.

10.6. Hazardous decomposition products
At higher temperatures isocyanate may be released.
Carbon dioxide is generated under contact with moisture, leading to pressure in the cans. Danger of cans bursting!

SECTION 11: Toxicological information

General toxicological information:
Persons suffering from allergic reactions to isocyanates should avoid contact with the product.
Cross-reactions with other isocyanate compounds are possible.

11.1. Information on toxicological effects

Acute oral toxicity:

The mixture is classified based on calculation method referring to the classified substances present in the mixture.

Hazardous substances CAS-No.	Value type	Value	Species	Method
4,4'- methylenediphenyl diisocyanate 101-68-8	LD50	> 2.000 mg/kg	rat	other guideline:
Diphenylmethane diisocyanate, isomers and homologues 9016-87-9	LD50	> 10.000 mg/kg	rat	OECD Guideline 401 (Acute Oral Toxicity)
o-(p-Isocyanatobenzyl)phenyl isocyanate 5873-54-1	LD50	> 2.000 mg/kg	rat	other guideline:

Acute dermal toxicity:

The mixture is classified based on calculation method referring to the classified substances present in the mixture.

Hazardous substances CAS-No.	Value type	Value	Species	Method
4,4'- methylenediphenyl diisocyanate 101-68-8	LD50	> 9.400 mg/kg	rabbit	OECD Guideline 402 (Acute Dermal Toxicity)
Diphenylmethane diisocyanate, isomers and homologues 9016-87-9	LD50	> 9.400 mg/kg	rat	OECD Guideline 402 (Acute Dermal Toxicity)
o-(p-Isocyanatobenzyl)phenyl isocyanate 5873-54-1	LD50	> 9.400 mg/kg	rabbit	OECD Guideline 402 (Acute Dermal Toxicity)

Acute inhalative toxicity:

No data available.

Skin corrosion/irritation:

The mixture is classified based on calculation method referring to the classified substances present in the mixture.

Hazardous substances CAS-No.	Result	Exposure time	Species	Method
4,4'- methylenediphenyl diisocyanate 101-68-8	irritating	4 h	rabbit	OECD Guideline 404 (Acute Dermal Irritation / Corrosion)
o-(p-Isocyanatobenzyl)phenyl isocyanate 5873-54-1	irritating		rabbit	OECD Guideline 404 (Acute Dermal Irritation / Corrosion)

Serious eye damage/irritation:

No data available.

Respiratory or skin sensitization:

The mixture is classified based on threshold limits referring to the classified substances present in the mixture.

Hazardous substances CAS-No.	Result	Test type	Species	Method
4,4'- methylenediphenyl diisocyanate 101-68-8	sensitising	Buehler test	guinea pig	OECD Guideline 406 (Skin Sensitisation)
o-(p-Isocyanatobenzyl)phenyl isocyanate 5873-54-1	sensitising	Respiratory sensitisation	guinea pig	not specified
o-(p-Isocyanatobenzyl)phenyl isocyanate 5873-54-1	not sensitising	Buehler test	guinea pig	OECD Guideline 406 (Skin Sensitisation)
o-(p-Isocyanatobenzyl)phenyl isocyanate 5873-54-1	sensitising	Mouse local lymphnode assay (LLNA)	mouse	OECD Guideline 429 (Skin Sensitisation: Local Lymph Node Assay)

Germ cell mutagenicity:

The mixture is classified based on threshold limits referring to the classified substances present in the mixture.

Hazardous substances CAS-No.	Result	Type of study / Route of administration	Metabolic activation / Exposure time	Species	Method
4,4'- methylenediphenyl diisocyanate 101-68-8	negative	bacterial reverse mutation assay (e.g Ames test)	with and without		EU Method B.13/14 (Mutagenicity)
o-(p-Isocyanatobenzyl)phenyl isocyanate 5873-54-1	negative	bacterial reverse mutation assay (e.g Ames test)	with and without		OECD Guideline 471 (Bacterial Reverse Mutation Assay)
4,4'- methylenediphenyl diisocyanate 101-68-8	negative	inhalation		rat	OECD Guideline 474 (Mammalian Erythrocyte Micronucleus Test)
o-(p-Isocyanatobenzyl)phenyl isocyanate 5873-54-1	negative	inhalation		rat	OECD Guideline 474 (Mammalian Erythrocyte Micronucleus Test)

Carcinogenicity

The mixture is classified based on threshold limits referring to the classified substances present in the mixture.

Hazardous components CAS-No.	Result	Route of application	Exposure time / Frequency of treatment	Species	Sex	Method
4,4'- methylenediphenyl diisocyanate 101-68-8	carcinogenic	inhalation: aerosol	2 y 6 h/d	rat	male/female	OECD Guideline 453 (Combined Chronic Toxicity / Carcinogenicity Studies)
o-(p-Isocyanatobenzyl)phenyl isocyanate 5873-54-1	carcinogenic	inhalation: aerosol	2 y 6 h/d, 5 d/w	rat	male/female	OECD Guideline 453 (Combined Chronic Toxicity / Carcinogenicity Studies)

Reproductive toxicity:

No data available.

STOT-single exposure:

No data available.

STOT-repeated exposure::

The mixture is classified based on threshold limits referring to the classified substances present in the mixture.

Hazardous substances CAS-No.	Result / Value	Route of application	Exposure time / Frequency of treatment	Species	Method
4,4'- methylenediphenyl diisocyanate 101-68-8		inhalation: aerosol	main: 2 y; satellite:1 y 6 h/d; 5 d/w	rat	OECD Guideline 453 (Combined Chronic Toxicity / Carcinogenicity Studies)
Diphenylmethane diisocyanate, isomers and homologues 9016-87-9	NOAEL 0,2 mg/m³	inhalation: aerosol	2 y 6 h per d, 5 d per week	rat	OECD Guideline 453 (Combined Chronic Toxicity / Carcinogenicity Studies)
o-(p-Isocyanatobenzyl)phenyl isocyanate 5873-54-1	NOAEL 0,2 mg/m³	inhalation: aerosol	2 y 6 h/d, 5 d/w	rat	OECD Guideline 453 (Combined Chronic Toxicity / Carcinogenicity Studies)

Aspiration hazard:

No data available.

SECTION 12: Ecological information

General ecological information:
Do not empty into drains, soil or bodies of water.

12.1. Toxicity

Toxicity (Fish):

The mixture is classified based on calculation method referring to the classified substances present in the mixture.

Hazardous substances CAS-No.	Value type	Value	Exposure time	Species	Method
4,4'- methylenediphenyl diisocyanate 101-68-8	LC50	> 1.000 mg/l	96 h	Danio rerio	OECD Guideline 203 (Fish, Acute Toxicity Test)
Diphenylmethane diisocyanate, isomers and homologues 9016-87-9	LC50	> 1.000 mg/l	96 h	Brachydanio rerio (new name: Danio rerio)	OECD Guideline 203 (Fish, Acute Toxicity Test)
o-(p-Isocyanatobenzyl)phenyl isocyanate 5873-54-1	LC50	> 1.000 mg/l	96 h	Danio rerio	OECD Guideline 203 (Fish, Acute Toxicity Test)

Toxicity (Daphnia):

The mixture is classified based on calculation method referring to the classified substances present in the mixture.

Hazardous substances CAS-No.	Value type	Value	Exposure time	Species	Method
4,4'- methylenediphenyl diisocyanate 101-68-8	EC50	129,7 mg/l	24 h	Daphnia magna	OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test)
Diphenylmethane diisocyanate, isomers and homologues 9016-87-9	EC50	> 1.000 mg/l	24 h	Daphnia magna	OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test)

Chronic toxicity to aquatic invertebrates

The mixture is classified based on calculation method referring to the classified substances present in the mixture.

Hazardous substances CAS-No.	Value type	Value	Exposure time	Species	Method
4,4'- methylenediphenyl diisocyanate 101-68-8	NOEC	10 mg/l	21 d	Daphnia magna	OECD 211 (Daphnia magna, Reproduction Test)
Diphenylmethane diisocyanate, isomers and homologues 9016-87-9	NOEC	10 mg/l	21 d	Daphnia magna	OECD 211 (Daphnia magna, Reproduction Test)

Toxicity (Algae):

The mixture is classified based on calculation method referring to the classified substances present in the mixture.

Hazardous substances CAS-No.	Value type	Value	Exposure time	Species	Method
4,4'- methylenediphenyl diisocyanate 101-68-8	EC50	> 1.640 mg/l	72 h	Scenedesmus subspicatus (new name: Desmodesmus subspicatus)	OECD Guideline 201 (Alga, Growth Inhibition Test)
4,4'- methylenediphenyl diisocyanate 101-68-8	NOELR	1.640 mg/l	72 h	Scenedesmus subspicatus (new name: Desmodesmus subspicatus)	OECD Guideline 201 (Alga, Growth Inhibition Test)
Diphenylmethane diisocyanate, isomers and homologues 9016-87-9	EC50	> 1.640 mg/l	72 h	Desmodesmus subspicatus	OECD Guideline 201 (Alga, Growth Inhibition Test)

Toxicity to microorganisms

The mixture is classified based on calculation method referring to the classified substances present in the mixture.

Hazardous substances CAS-No.	Value type	Value	Exposure time	Species	Method
4,4'- methylenediphenyl diisocyanate 101-68-8	EC50	> 100 mg/l	3 h	activated sludge	OECD Guideline 209 (Activated Sludge, Respiration Inhibition Test)
Diphenylmethane diisocyanate, isomers and homologues 9016-87-9	EC50	> 100 mg/l	3 h	activated sludge	OECD Guideline 209 (Activated Sludge, Respiration Inhibition Test)

12.2. Persistence and degradability

Hazardous substances CAS-No.	Result	Test type	Degradability	Exposure time	Method
4,4'- methylenediphenyl diisocyanate 101-68-8	not readily biodegradable.	aerobic	0 %	28 d	OECD Guideline 301 F (Ready Biodegradability: Manometric Respirometry Test)
Diphenylmethane diisocyanate, isomers and homologues 9016-87-9	not inherently biodegradable	aerobic	0 %	28 d	OECD Guideline 302 C (Inherent Biodegradability: Modified MITI Test (II))

12.3. Bioaccumulative potential

Hazardous substances CAS-No.	Bioconcentration factor (BCF)	Exposure time	Temperature	Species	Method
4,4'- methylenediphenyl diisocyanate 101-68-8	92 - 200	28 d		Cyprinus carpio	OECD Guideline 305 E (Bioaccumulation: Flow-through Fish Test)
Diphenylmethane diisocyanate, isomers and homologues 9016-87-9	200			Cyprinus carpio	OECD Guideline 305 (Bioconcentration: Flow-through Fish Test)

12.4. Mobility in soil

Hazardous substances CAS-No.	LogPow	Temperature	Method
4,4'- methylenediphenyl diisocyanate 101-68-8	4,51	22 °C	OECD Guideline 117 (Partition Coefficient (n-octanol / water), HPLC Method)
o-(p-Isocyanatobenzyl)phenyl isocyanate 5873-54-1	5,22		not specified

12.5. Results of PBT and vPvB assessment

Hazardous substances CAS-No.	PBT / vPvB
4,4'- methylenediphenyl diisocyanate 101-68-8	Not fulfilling Persistent, Bioaccumulative and Toxic (PBT), very Persistent and very Bioaccumulative (vPvB) criteria.
o-(p-Isocyanatobenzyl)phenyl isocyanate 5873-54-1	Not fulfilling Persistent, Bioaccumulative and Toxic (PBT), very Persistent and very Bioaccumulative (vPvB) criteria.

12.6. Other adverse effects

No data available.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Product disposal:
Dispose of waste and residues in accordance with local authority requirements.

Disposal of uncleaned packages:
Use packages for recycling only when totally empty.

Waste code
08 05 01

SECTION 14: Transport information

14.1. UN number

Not hazardous according to RID, ADR, ADN, IMDG, IATA-DGR.

14.2. UN proper shipping name

Not hazardous according to RID, ADR, ADN, IMDG, IATA-DGR.

14.3. Transport hazard class(es)

Not hazardous according to RID, ADR, ADN, IMDG, IATA-DGR.

14.4. Packing group

Not hazardous according to RID, ADR, ADN, IMDG, IATA-DGR.

14.5. Environmental hazards

Not hazardous according to RID, ADR, ADN, IMDG, IATA-DGR.

14.6. Special precautions for user

Not hazardous according to RID, ADR, ADN, IMDG, IATA-DGR.

14.7. Transport in bulk according to Annex II of Marpol and the IBC Code

not applicable

SECTION 15: Regulatory information

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

VOC content 0,00 %
(VOCV 814.018 VOC regulation
CH)

15.2. Chemical safety assessment

A chemical safety assessment has not been carried out.

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:

H315 Causes skin irritation.
H317 May cause an allergic skin reaction.
H319 Causes serious eye irritation.
H332 Harmful if inhaled.
H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H335 May cause respiratory irritation.
H351 Suspected of causing cancer.
H373 May cause damage to organs through prolonged or repeated exposure.

Further information:

This Safety Data Sheet has been produced for sales from Henkel to parties purchasing from Henkel, is based on Regulation (EC) No 1907/2006 and provides information in accordance with applicable regulations of the European Union only. In that respect, no statement, warranty or representation of any kind is given as to compliance with any statutory laws or regulations of any other jurisdiction or territory other than the European Union. When exporting to territories other than the European Union, please consult with the respective Safety Data Sheet of the concerned territory to ensure compliance or liaise with Henkel´s Product Safety and Regulatory Affairs Department (ua-productsafety.de@henkel.com) prior to export to other territories than the European Union.

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.

Relevant changes in this safety data sheet are indicated by vertical lines at the left margin in the body of this document. Corresponding text is displayed in a different color on shadowed fields.

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

SDS No. : 41165
V001.0

Assil Expansionsharz

Revision: 17.04.2019
printing date: 30.10.2019
Replaces version from: -

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

1.1. Product identifier
Assil Expansionsharz (Komp. B)

1.2. Relevant identified uses of the substance or mixture and uses advised against
Intended use:
Expansion adhesive, 2-component without propellant gas

1.3. Details of the supplier of the safety data sheet
Henkel Ltd
Wood Lane End
HP2 4RQ Hemel Hempstead

Great Britain

Phone: +44 1442 278000
Fax-no.: +44 1442 278071

ua-productsafety.uk@henkel.com

1.4. Emergency telephone number
24 Hours Emergency Tel: +44 0 8701 906777 - For further general health & safety, technical and practical advice on this product, please call +44 (0) 1606 593933 or write to: Technical Services; Henkel Limited; Road 5; Winsford Industrial Estate; Winsford; Cheshire; CW7 3QY- Email: technical.services@henkel.co.uk

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification (CLP):

Skin irritation	Category 2
H315 Causes skin irritation.	
Serious eye irritation	Category 2
H319 Causes serious eye irritation.	

2.2. Label elements

Label elements (CLP):

Hazard pictogram:

Signal word: Warning

Hazard statement:	H315 Causes skin irritation. H319 Causes serious eye irritation.
Precautionary statement:	P102 Keep out of reach of children. P101 If medical advice is needed, have product container or label at hand.
Precautionary statement: Prevention	P280 Wear protective gloves/eye protection.
Precautionary statement: Response	P302+P352 IF ON SKIN: Wash with plenty of water. P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P337+P313 If eye irritation persists: Get medical advice/attention.

2.3. Other hazards
None if used properly.
Not fulfilling Persistent, Bioaccumulative and Toxic (PBT), very Persistent and very Bioaccumulative (vPvB) criteria.

SECTION 3: Composition/information on ingredients

3.2. Mixtures

General chemical description:
Resin of a 2-component PU adhesive
Base substances of preparation:
Polyether polyols

Declaration of the ingredients according to CLP (EC) No 1272/2008:

Hazardous components CAS-No.	EC Number REACH-Reg No.	content	Classification
1-Methylimidazole 616-47-7	210-484-7 01-2119979544-23	1- < 3 %	Acute Tox. 4 H302 Acute Tox. 3 H311 Skin Corr. 1B H314

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.

SECTION 4: First aid measures

4.1. Description of first aid measures

General information:
In case of adverse health effects seek medical advice.

Inhalation:
Move to fresh air, consult doctor if complaint persists.

Skin contact:
Fresh foam : Wipe off affected skin area immediately with a soft cloth and then remove residues with vegetable oil; apply skin care product. Cured foam can be removed only mechanically.

Eye contact:
Immediately flush eyes with soft jet of water or eye rinse solution for at least 5 minutes. If pains remain (intensive smarting, sensitivity to light, visual disturbance) continue flushing and contact/seek doctor or hospital.

Ingestion:
Rinse mouth and throat. Drink 1-2 glasses of water. Seek medical advice.

4.2. Most important symptoms and effects, both acute and delayed
Causes serious eye irritation.

SKIN: Redness, inflammation.

4.3. Indication of any immediate medical attention and special treatment needed
See section: Description of first aid measures

SECTION 5: Firefighting measures

5.1. Extinguishing media
Suitable extinguishing media:
carbon dioxide, foam, powder, water spray jet, fine water spray

Extinguishing media which must not be used for safety reasons:
High pressure waterjet

5.2. Special hazards arising from the substance or mixture
In the event of a fire, carbon monoxide (CO) and carbon dioxide (CO2) can be released.

5.3. Advice for firefighters
Wear self-contained breathing apparatus.
Wear protective equipment.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures
Wear protective equipment.
Danger of slipping on spilled product.
Avoid contact with skin and eyes.

6.2. Environmental precautions
Do not empty into drains / surface water / ground water.

6.3. Methods and material for containment and cleaning up
Remove with liquid-absorbing material (sand, peat, sawdust).
Dispose of contaminated material as waste according to Section 13.

6.4. Reference to other sections
See advice in section 8

SECTION 7: Handling and storage

7.1. Precautions for safe handling
Avoid skin and eye contact.

Hygiene measures:
Do not eat, drink or smoke while working.
Wash hands before work breaks and after finishing work.
Remove any dirt that gets onto the skin with vegetable oil; skin care.

7.2. Conditions for safe storage, including any incompatibilities
Store in a cool place in closed original container.
Store in a dry place.
Avoid strictly temperatures below + 2°C and above + 30 °C.
Do not store together with food or other consumables (coffee, tea, tobacco, etc.).
Do not store together with oxidants.
Do not store together with flammable solutions.

7.3. Specific end use(s)
Expansion adhesive, 2-component without propellant gas

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Occupational Exposure Limits

Valid for
Great Britain

None

Occupational Exposure Limits

Valid for
Ireland

None

Predicted No-Effect Concentration (PNEC):

Name on list	Environmental Compartment	Exposure period	Value				Remarks
			mg/l	ppm	mg/kg	others	
1-Methylimidazole 616-47-7	aqua (freshwater)		0,1 mg/l				
1-Methylimidazole 616-47-7	aqua (marine water)		0,01 mg/l				
1-Methylimidazole 616-47-7	aqua (intermittent releases)		1 mg/l				
1-Methylimidazole 616-47-7	sediment (freshwater)				6,95 mg/kg		
1-Methylimidazole 616-47-7	sediment (marine water)				0,695 mg/kg		
1-Methylimidazole 616-47-7	Soil				1,26 mg/kg		
1-Methylimidazole 616-47-7	Sewage treatment plant		590 mg/l				

Derived No-Effect Level (DNEL):

Name on list	Application Area	Route of Exposure	Health Effect	Exposure Time	Value	Remarks
1-Methylimidazole 616-47-7	worker	inhalation	Long term exposure - systemic effects		7,9 mg/m3	
1-Methylimidazole 616-47-7	worker	dermal	Long term exposure - systemic effects		2,25 mg/kg	

Biological Exposure Indices:
None

8.2. Exposure controls:

Respiratory protection:
Suitable breathing mask when there is inadequate ventilation.
Combination filter: ABEKP (EN 14387)
This recommendation should be matched to local conditions.

Hand protection:
Recommended are gloves made from Nitril rubber (Material thickness >0,1 mm, Perforation time < 30s).Gloves should be replaced after each short time contact or contamination. Available at laboratory specialized trade or at pharmacies / chemist's shops.
In the case of longer contact protective gloves made from nitrile rubber are recommended according to EN 374.
material thickness > 0.4 mm
Perforation time > 480 minutes
In the case of longer and repeated contact please note that in practice the penetration times may be considerably shorter than those determined according to EN 374. The protective gloves must always be checked for their suitability for use at the specific workplace (e.g. mechanical and thermal stress, product compatibility, antistatic effects, etc.). The gloves must be replaced immediately at the first signs of wear and tear. The information provided by the manufacturers and given in the relevant trade association regulations for industrial safety must always be observed. We recommend that a hand care plan is drawn up in cooperation with a glove manufacturer and the trade association in accordance with the local operating conditions.

Eye protection:
Goggles which can be tightly sealed.
Protective eye equipment should conform to EN166.

Skin protection:
Suitable protective clothing
Protective clothing should conform to EN 14605 for liquid splashes or to EN 13982 for dusts.

Advices to personal protection equipment:
The information provided on personal protective equipment is for guidance purposes only. A full risk assessment should be conducted prior to using this product to determine the appropriate personal protective equipment to suit local conditions.
Personal protective equipment should conform to the relevant EN standard.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Appearance	liquid free-flowing black
Odor	slightly, musty
Odour threshold	No data available / Not applicable
pH	No data available / Not applicable
Melting point	No data available / Not applicable
Solidification temperature	No data available / Not applicable
Initial boiling point	No data available / Not applicable
Flash point	No data available / Not applicable
Evaporation rate	No data available / Not applicable
Flammability	No data available / Not applicable
Explosive limits	No data available / Not applicable
Vapour pressure	No data available / Not applicable
Relative vapour density:	No data available / Not applicable
Density (20 °C (68 °F))	1,07 - 1,09 g/cm3
Bulk density	No data available / Not applicable
Solubility	No data available / Not applicable
Solubility (qualitative) (23 °C (73.4 °F); Solvent: Water)	Not miscible or difficult to mix
Partition coefficient: n-octanol/water	No data available / Not applicable
Auto-ignition temperature	No data available / Not applicable
Decomposition temperature	No data available / Not applicable
Viscosity (Brookfield; 20 °C (68 °F))	1.500 - 1.700 mPa.s
Viscosity (kinematic)	No data available / Not applicable
Explosive properties	No data available / Not applicable
Oxidising properties	No data available / Not applicable

9.2. Other information

No data available / Not applicable

SECTION 10: Stability and reactivity

10.1. Reactivity
None if used for intended purpose.

10.2. Chemical stability
Stable under recommended storage conditions.

10.3. Possibility of hazardous reactions
See section reactivity

10.4. Conditions to avoid
None if used for intended purpose.

10.5. Incompatible materials
None if used properly.

10.6. Hazardous decomposition products
None known.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute oral toxicity:

The mixture is classified based on calculation method referring to the classified substances present in the mixture.

Hazardous substances CAS-No.	Value type	Value	Species	Method
1-Methylimidazole 616-47-7	LD50	1.144 mg/kg	rat	BASF Test

Acute dermal toxicity:

The mixture is classified based on calculation method referring to the classified substances present in the mixture.

Hazardous substances CAS-No.	Value type	Value	Species	Method
1-Methylimidazole 616-47-7	LD50	400 - 640 mg/kg	rabbit	OECD Guideline 402 (Acute Dermal Toxicity)

Acute inhalative toxicity:

No data available.

Skin corrosion/irritation:

The mixture is classified based on calculation method referring to the classified substances present in the mixture.

Hazardous substances CAS-No.	Result	Exposure time	Species	Method
1-Methylimidazole 616-47-7	corrosive		rabbit	BASF Test

Serious eye damage/irritation:

No data available.

Respiratory or skin sensitization:

No data available.

Germ cell mutagenicity:

No data available.

Carcinogenicity

No data available.

Reproductive toxicity:

No data available.

STOT-single exposure:

No data available.

STOT-repeated exposure::

No data available.

Aspiration hazard:

No data available.

SECTION 12: Ecological information

General ecological information:
Do not empty into drains, soil or bodies of water.

12.1. Toxicity

Toxicity (Fish):

The mixture is classified based on calculation method referring to the classified substances present in the mixture.

Hazardous substances CAS-No.	Value type	Value	Exposure time	Species	Method
1-Methylimidazole 616-47-7	LC50	> 100 - 220 mg/l	96 h	Leuciscus idus	OECD Guideline 203 (Fish, Acute Toxicity Test)

Toxicity (Daphnia):

The mixture is classified based on calculation method referring to the classified substances present in the mixture.

Hazardous substances CAS-No.	Value type	Value	Exposure time	Species	Method
1-Methylimidazole 616-47-7	EC50	268 mg/l	48 h	Daphnia sp.	OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test)

Chronic toxicity to aquatic invertebrates

No data available.

Toxicity (Algae):

The mixture is classified based on calculation method referring to the classified substances present in the mixture.

Hazardous substances CAS-No.	Value type	Value	Exposure time	Species	Method
1-Methylimidazole 616-47-7	EC50	180 mg/l	72 h		OECD Guideline 201 (Alga, Growth Inhibition Test)

Toxicity to microorganisms

The mixture is classified based on calculation method referring to the classified substances present in the mixture.

Hazardous substances CAS-No.	Value type	Value	Exposure time	Species	Method
1-Methylimidazole 616-47-7	EC 50	1.100 mg/l	17 h		not specified

12.2. Persistence and degradability

Hazardous substances CAS-No.	Result	Test type	Degradability	Exposure time	Method
1-Methylimidazole 616-47-7			< 30 %		OECD Guideline 302 B (Inherent biodegradability: Zahn-Wellens/EMPA Test)

12.3. Bioaccumulative potential

No data available.

12.4. Mobility in soil

No data available.

12.5. Results of PBT and vPvB assessment

Hazardous substances CAS-No.	PBT / vPvB
1-Methylimidazole 616-47-7	Not fulfilling Persistent, Bioaccumulative and Toxic (PBT), very Persistent and very Bioaccumulative (vPvB) criteria.

12.6. Other adverse effects

No data available.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Product disposal:
Dispose of waste and residues in accordance with local authority requirements.

Disposal of uncleaned packages:
Use packages for recycling only when totally empty.

Waste code
080409

SECTION 14: Transport information

14.1. UN number

Not hazardous according to RID, ADR, ADN, IMDG, IATA-DGR.

14.2. UN proper shipping name

Not hazardous according to RID, ADR, ADN, IMDG, IATA-DGR.

14.3. Transport hazard class(es)

Not hazardous according to RID, ADR, ADN, IMDG, IATA-DGR.

14.4. Packing group

Not hazardous according to RID, ADR, ADN, IMDG, IATA-DGR.

14.5. Environmental hazards

Not hazardous according to RID, ADR, ADN, IMDG, IATA-DGR.

14.6. Special precautions for user

Not hazardous according to RID, ADR, ADN, IMDG, IATA-DGR.

14.7. Transport in bulk according to Annex II of Marpol and the IBC Code

not applicable

SECTION 15: Regulatory information

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

VOC content 0,00 %
(VOCV 814.018 VOC regulation CH)

15.2. Chemical safety assessment

A chemical safety assessment has not been carried out.

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:

H302 Harmful if swallowed.
H311 Toxic in contact with skin.
H314 Causes severe skin burns and eye damage.

Further information:

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