SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006

Körapur® 140 weiss

Version	Revision Date:	SDS Number:	Date of last issue: -
1.0	03.10.2022	100000015716	Date of first issue: 03.10.2022

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

1.1 Product identifier

Product name : Körapur® 140 weiss

Product code : 000000000015040542

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

Use of the Sub-stance/Mixture : Adhesive, Sealant

Recommended restrictions on use : For industrial use only.

1.3 Details of the supplier of the safety data sheet

Company : H.B. Fuller, Isar-Rakoll, S.A.

Address : Estrada Nacional 13
PT-4486-851 Mindelo - Vila do Conde
+351 229 288 200

E-mail address of person responsible for the SDS : EU-MSDS@hbfuller.com

1.4 Emergency telephone number

Emergency telephone number : In case of poisoning:
GBK-EMTEL International
Tel.(24h): +49(0)6132/84463 (all languages)

In case of transport accidents:
Tel.(24h): (001) 352 323 3500 (Infotrac - Contract ID: 90373 / GBK)

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification (REGULATION (EC) No 1272/2008)

Respiratory sensitisation, Category 1	H334: May cause allergy or asthma symptoms or breathing difficulties if inhaled.

2.2 Label elements

Labelling (REGULATION (EC) No 1272/2008)

Hazard pictograms :

Signal word : Danger

Hazard statements : H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.

Precautionary statements :

Prevention:

P261 Avoid breathing dust.
P284 Wear respiratory protection.

Response:

P304 + P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P342 + P311 If experiencing respiratory symptoms: Call a POISON CENTER/ doctor.

Disposal:

P501 Dispose of contents/ container to an approved waste disposal plant.

Hazardous components which must be listed on the label:

4,4'-methylenediphenyl diisocyanate
4,4'-Methylenediphenyl diisocyanate, oligomers

Additional Labelling

EUH204 Contains isocyanates. May produce an allergic reaction.
EUH212 Warning! Hazardous respirable dust may be formed when used. Do not breathe dust.

"As from 24 August 2023 adequate training is required before industrial or professional use."

2.3 Other hazards

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

SECTION 3: Composition/information on ingredients

3.2 Mixtures

Components

Chemical name	CAS-No. EC-No.	Classification	Concentration (% w/w)

	Index-No. Registration number		
Reaction mass of ethylbenzene and xylene	Not Assigned 905-588-0 01-2119488216-32-0000	Flam. Liq. 3; H226 Acute Tox. 4; H332 Skin Irrit. 2; H315 Eye Irrit. 2; H319 STOT SE 3; H335 (Respiratory system) STOT RE 2; H373 Asp. Tox. 1; H304 Acute Tox. 4; H312	>= 1 - < 10
titanium dioxide (Airborne, unbound particles of respirable size)	13463-67-7 236-675-5 01-2119489379-17-0000	Carc. 2; H351	>= 1 - < 10
4,4'-methylenediphenyl diisocyanate	101-68-8 202-966-0 615-005-00-9 01-2119457014-47-0000	Acute Tox. 4; H332 Skin Irrit. 2; H315 Eye Irrit. 2; H319 Resp. Sens. 1; H334 Skin Sens. 1; H317 Carc. 2; H351 STOT SE 3; H335 (Respiratory system) STOT RE 2; H373 --- specific concentration limit Eye Irrit. 2; H319 >= 5 % STOT SE 3; H335 >= 5 % Skin Irrit. 2; H315 >= 5 % Resp. Sens. 1; H334 >= 0,1 % --- Acute toxicity estimate Acute inhalation toxicity (dust/mist): 1,5 mg/l	>= 0,1 - < 1
4,4'-Methylenediphenyl diisocyanate, oligomers	25686-28-6 500-040-3 01-2119457013-49-0000	Acute Tox. 4; H332 Skin Irrit. 2; H315 Eye Irrit. 2; H319 Resp. Sens. 1; H334 Skin Sens. 1; H317 STOT SE 3; H335 (Respiratory system)	>= 0,1 - < 1

		STOT RE 2; H373 (Respiratory system) Carc. 2; H351 --- Acute toxicity estimate Acute inhalation toxicity (dust/mist): 1,5 mg/l	

For explanation of abbreviations see section 16.

SECTION 4: First aid measures

4.1 Description of first aid measures

General advice : Even minimal concentrations of isocyanate can lead to a reaction in sensitised people.
Symptoms that may occur include the following:
irritation of the eyes, nose, throat and lungs, possibly together with a dry throat, a feeling of chest tightness and breathing difficulties.

Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.
Show this safety data sheet to the doctor in attendance.

If inhaled : Remove person to fresh air. If signs/symptoms continue, get medical attention.
In case of unconsciousness bring patient into stable side position for transport.

In case of skin contact : Treat affected skin with cotton wool or cellulose.
Wash off with plenty of water.
Use a mild soap if available.
If skin irritation persists, call a physician.

In case of eye contact : Flush eyes with water at least 15 minutes. Get medical attention if eye irritation develops or persists.

If swallowed : If accidentally swallowed obtain immediate medical attention.
Do NOT induce vomiting.

4.2 Most important symptoms and effects, both acute and delayed

None known.

4.3 Indication of any immediate medical attention and special treatment needed

Treatment : In instances of existing sensitisation towards isocyanates, a

doctor should be consulted with regards to work-related contact with other sensitising substances, or substances which irritate the airway.

Treatment for exposure should be geared towards monitoring symptoms and the patient's clinical condition.
It must be ensured that the patient has sufficient ventilation and oxygen supply.

Isocyanates can cause sensitisation of the airways, or asthma-like symptoms (bronchospasms). Delayed breathing symptoms, including lung oedema, may occur.

People who have shown signs of breathlessness after considerable exposure should remain under observation for 24-48 hours.

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media	:	Use extinguishing measures that are appropriate to local circumstances and the surrounding environment. Water spray Alcohol-resistant foam Dry powder Carbon dioxide (CO2)
Unsuitable extinguishing media	:	Water with a full water jet

5.2 Special hazards arising from the substance or mixture

Specific hazards during fire-fighting	:	May release toxic, irritating and/or corrosive gases. In case of fire, the following substance(s) may occur: Hydrogen chloride (HCl) Nitrogen oxides Sulphur oxides (SOx) Carbon monoxide

5.3 Advice for firefighters

Special protective equipment for firefighters	:	Wear an approved positive pressure self-contained breathing apparatus in addition to standard fire fighting gear.
Further information	:	In the event of fire, wear self-contained breathing apparatus. Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Personal precautions : Use personal protective equipment.
Ensure adequate ventilation.

6.2 Environmental precautions

Environmental precautions : The product should not be allowed to enter drains, water courses or the soil.
If the product contaminates rivers and lakes or drains inform respective authorities.

6.3 Methods and material for containment and cleaning up

Methods for cleaning up : Ensure adequate ventilation.
Send for recovery or disposal in suitable containers.
Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust).
Dispose of contaminated material as waste according to section 13.

6.4 Reference to other sections

Refer to protective measures listed in sections 7 and 8., For disposal considerations see section 13.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Advice on safe handling : Avoid formation of dust and aerosols.
Use only with adequate ventilation.
Handle with care.
Keep eye wash bottle available on working place.
Avoid release to the environment.
Keep away from children.

Advice on protection against fire and explosion : In the event of fire and/or explosion do not breathe fumes. Keep breathing equipment ready. Have fire extinguishing equipment ready in case of nearby fire. The product contains small quantities of organic solvents. The possibility of an ignitable vapour / air mixture forming is very slight but, under certain local conditions, this should not be overlooked. Keep away from sources of ignition - No smoking.

7.2 Conditions for safe storage, including any incompatibilities

Requirements for storage areas and containers : Keep dark, cool and dry. Do not freeze.

Further information on stor- : Keep containers tightly closed in a dry, cool and well-

age conditions ventilated place. Store in a cool place. Heat will increase pressure and may lead to the container exploding.

Storage class (TRGS 510) : 13, Non Combustible Solids

7.3 Specific end use(s)

Specific use(s) : No further relevant information available.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Contains no substances with occupational exposure limit values.

Derived No Effect Level (DNEL) according to Regulation (EC) No. 1907/2006:

Substance name	End Use	Exposure routes	Potential health effects	Value
4,4'-methylenediphenyl diisocyanate	Workers	Dermal	Acute systemic effects	50 mg/kg
	Workers	Inhalation	Acute systemic effects	0,1 mg/m3
	Workers	Dermal	Local effects	28,7 mg/cm2
	Workers	Inhalation	Local effects	0,1 mg/m3
	Workers	Inhalation	Long-term systemic effects	0,05 mg/m3
	Workers	Inhalation	Local effects	0,05 mg/m3

Predicted No Effect Concentration (PNEC) according to Regulation (EC) No. 1907/2006:

Substance name	Environmental Compartment	Value
4,4'-methylenediphenyl diisocyanate	Fresh water	> 1 mg/l
	Marine water	> 0,1 mg/l
	Soil	> 1 mg/kg
	Sewage treatment plant	> 1 mg/l

8.2 Exposure controls

Engineering measures

Please take care on national and local requirements.

Personal protective equipment

Eye protection : Tightly fitting safety goggles

Hand protection

Material : Nitrile rubber

Remarks : Direct contact with the isocyanate-based product must be avoided by organizational measures.
The glove material has to be impermeable and resistant to

the product/the substance/the preparation. The exact break through time can be obtained from the protective glove producer and this has to be observed.

Skin and body protection : Protective clothing
When carrying out activities where unintentional skin contact with the isocyanate-based product may occur (e.g. during maintenance work, or when opening a barrel), wear long-sleeved protective clothing and gloves.

Respiratory protection : Use respiratory protection unless adequate local exhaust ventilation is provided or exposure assessment demonstrates that exposures are within recommended exposure guidelines.

Protective measures : Keep away from food, drink and animal feedingstuffs.
Instantly remove any soiled and impregnated garments.
Wash hands before breaks and immediately after handling the product.
Avoid contact with the eyes and skin.
Store protective clothing separately.

Environmental exposure controls

Air : Suppress (knock down) gases/vapours/mists with a water spray jet.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Physical state	:	solid
Colour	:	white
Odour	:	solvent-like
Odour Threshold	:	is not determined
Melting point/freezing point	:	is not determined
Boiling point/boiling range	:	is not determined
Flammability	:	Not classified as a flammability hazard
Upper explosion limit / Upper flammability limit	:	Upper flammability limit is not determined
Lower explosion limit / Lower flammability limit	:	Lower flammability limit is not determined
Flash point	:	Not applicable

Auto-ignition temperature	:	not self-igniting
Decomposition temperature	:	Not applicable
pH	:	is not determined
Solubility(ies) Water solubility	:	not miscible or difficult to mix, reacts with water
Partition coefficient: n-octanol/water	:	no data available
Vapour pressure	:	is not determined
Density	:	1,16 g/cm³
Relative vapour density	:	is not determined

9.2 Other information

Explosives	:	Not explosive
Evaporation rate	:	is not determined

SECTION 10: Stability and reactivity

10.1 Reactivity

No further relevant information available.

10.2 Chemical stability

No decomposition if used according to the specifications.

10.3 Possibility of hazardous reactions

Hazardous reactions	:	Reacts with alcohols, amines, aqueous acids and alkalis. Mixture reacts slowly with water resulting in evolution of CO2. Evolution of CO2 in closed containers causes overpressure and produces a risk of bursting.

10.4 Conditions to avoid

Conditions to avoid	:	No further relevant information available.

10.5 Incompatible materials

Materials to avoid	:	No further relevant information available.

10.6 Hazardous decomposition products

No hazardous decomposition products are known.

SECTION 11: Toxicological information

11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008

Acute toxicity

Product:

Acute inhalation toxicity : Acute toxicity estimate: > 5 mg/l
Exposure time: 4 h
Test atmosphere: dust/mist
Method: Calculation method

Acute dermal toxicity : Acute toxicity estimate: > 2.000 mg/kg
Method: Calculation method

Components:

Reaction mass of ethylbenzene and xylene:

Acute dermal toxicity : LD50 (Rat): 1.468 mg/kg

4,4'-methylenediphenyl diisocyanate:

Acute inhalation toxicity : LC50: 1,5 mg/l
Exposure time: 4 h
Test atmosphere: dust/mist

Acute toxicity estimate: 1,5 mg/l
Test atmosphere: dust/mist
Method: Calculation method

4,4'-Methylenediphenyl diisocyanate, oligomers:

Acute inhalation toxicity : LC50: 1,5 mg/l
Exposure time: 4 h
Test atmosphere: dust/mist

Acute toxicity estimate: 1,5 mg/l
Test atmosphere: dust/mist
Method: Calculation method

Carcinogenicity

Components:

titanium dioxide (Airborne, unbound particles of respirable size):

Carcinogenicity - Assessment : Not classifiable as a human carcinogen.

11.2 Information on other hazards

Endocrine disrupting properties

Product:

Assessment : The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

SECTION 12: Ecological information

12.1 Toxicity

No data available

12.2 Persistence and degradability

No data available

12.3 Bioaccumulative potential

No data available

12.4 Mobility in soil

Product:

Mobility : Medium: Soil
Remarks: Do not allow product to reach ground water, water bodies or sewage system.

12.5 Results of PBT and vPvB assessment

Product:

Assessment : This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

12.6 Endocrine disrupting properties

Product:

Assessment : The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

12.7 Other adverse effects

No data available

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Product : Do not dispose of with domestic refuse.
Do not dispose of waste into sewer.
Hand over to disposers of hazardous waste.
Can be deposited with household garbage after solidification following consultation with the operator of the waste disposal facility and the pertinent authorities and under adherence to the necessary technical regulations.
The generation of waste should be avoided or minimized wherever possible.
Incinerate under controlled conditions in accordance with all local and national laws and regulations.
Disposal must be made according to official regulations.

These EU waste code numbers are recommendations for waste accruing through the use of adhesives and sealants. Any waste produced from organic solvents or other dangerous substances (according GHS) listed under section 3 of this safety datasheet is itself classified as dangerous (*).

Waste accruing during application:
08 04 09* waste adhesives and sealants containing organic solvents or other dangerous substances
08 04 10 waste adhesives and sealants other than those mentioned in 08 04 09

Waste accruing during cleaning:
08 04 11* adhesive and sealant sludges containing organic solvents or other dangerous substances
08 04 12 adhesive and sealant sludges other than those mentioned in 08 04 11

Waste packaging:
15 01 01 paper and cardboard packaging
15 01 02 plastic packaging
15 01 04 metallic packaging
15 01 10* packaging containing residues of or contaminated by dangerous substances.

Contaminated packaging : Disposal must be made according to official regulations.

SECTION 14: Transport information

14.1 UN number or ID number

Not regulated as a dangerous good

14.2 UN proper shipping name

Not regulated as a dangerous good

14.3 Transport hazard class(es)

Not regulated as a dangerous good

14.4 Packing group

Not regulated as a dangerous good

14.5 Environmental hazards

Not regulated as a dangerous good

14.6 Special precautions for user

Not applicable

14.7 Maritime transport in bulk according to IMO instruments

Not applicable for product as supplied.

SECTION 15: Regulatory information

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

REACH - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles (Annex XVII)	:	Conditions of restriction for the following entries should be considered: 4,4'-methylenediphenyl diisocyanate (Number on list 74) 4,4'-Methylenediphenyl diisocyanate, oligomers o-(p-isocyanatobenzyl)phenyl isocyanate dibutyltin dilaurate (Number on list 30)
REACH - Candidate List of Substances of Very High Concern for Authorisation (Article 59).	:	Not applicable
Regulation (EC) No 1005/2009 on substances that deplete the ozone layer	:	Not applicable
Regulation (EU) 2019/1021 on persistent organic pollutants (recast)	:	Not applicable
RoHS: 2011/65/EU, Restriction of Hazardous Substances	:	Not applicable
Regulation (EC) No 649/2012 of the European Parliament and the Council concerning the export and import of dangerous chemicals	:	Not applicable
REACH - List of substances subject to authorisation (Annex XIV)	:	Not applicable

Seveso III: Directive 2012/18/EU of the European Parliament and of the Council on the control of major-accident hazards involving dangerous substances.		Not applicable

Volatile organic compounds : Directive 2010/75/EU of 24 November 2010 on industrial emissions (integrated pollution prevention and control)
Volatile organic compounds (VOC) content: 7,5 %, 87 g/l

Other regulations:
Take note of Directive 94/33/EC on the protection of young people at work or stricter national regulations, where applicable.

The components of this product are reported in the following inventories:

TCSI	:	On the inventory, or in compliance with the inventory
TSCA	:	All substances listed as active on the TSCA inventory
AIIC	:	On the inventory, or in compliance with the inventory
DSL	:	All components of this product are on the Canadian DSL
ENCS	:	On the inventory, or in compliance with the inventory
KECI	:	On the inventory, or in compliance with the inventory
IECSC	:	On the inventory, or in compliance with the inventory
REACH	:	On the inventory, or in compliance with the inventory

15.2 Chemical safety assessment
No Chemical Safety Assessment has been carried out for this mixture.

SECTION 16: Other information

Full text of H-Statements

H226	:	Flammable liquid and vapour.
H304	:	May be fatal if swallowed and enters airways.

H312	:	Harmful in contact with skin.
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.

Full text of other abbreviations

Acute Tox.	:	Acute toxicity
Asp. Tox.	:	Aspiration hazard
Carc.	:	Carcinogenicity
Eye Irrit.	:	Eye irritation
Flam. Liq.	:	Flammable liquids
Resp. Sens.	:	Respiratory sensitisation
Skin Irrit.	:	Skin irritation
Skin Sens.	:	Skin sensitisation
STOT RE	:	Specific target organ toxicity - repeated exposure
STOT SE	:	Specific target organ toxicity - single exposure

ADN - European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways; ADR - Agreement concerning the International Carriage of Dangerous Goods by Road; AIIC - Australian Inventory of Industrial Chemicals; ASTM - American Society for the Testing of Materials; bw - Body weight; CLP - Classification Labelling Packaging Regulation; Regulation (EC) No 1272/2008; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DSL - Domestic Substances List (Canada); ECHA - European Chemicals Agency; EC-Number - European Community number; ECx - Concentration associated with x% response; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate response; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organisation for Standardization; KECI - Korea Existing Chemicals Inventory; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; n.o.s. - Not Otherwise Specified; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NZIoC - New Zealand Inventory of Chemicals; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; RID - Regulations concerning the International Carriage of Dangerous

Goods by Rail; SADT - Self-Accelerating Decomposition Temperature; SDS - Safety Data Sheet; SVHC - Substance of Very High Concern; TCSI - Taiwan Chemical Substance Inventory; TECI - Thailand Existing Chemicals Inventory; TRGS - Technical Rule for Hazardous Substances; TSCA - Toxic Substances Control Act (United States); UN - United Nations; vPvB - Very Persistent and Very Bioaccumulative

Further information

Other information	:	This safety datasheet only contains information relating to safety and does not replace any product information or product specification. Penetrometer test according to ADR 2.3.4.3 Test result: solid (penetration after 5 s < 15 mm) Burning test according to 33.2.1.4 "Manual of Tests and Criteria" (Recommendations on the TRANSPORT OF DANGEROUS GOODS [United Nations]): Burning rate: ≤ 2.2 mm/s (Not a dangerous good according to ADR class 4.1)
Contact Point	:	Prepared by: Global Regulatory Department EU-MSDS@hbfuller.com

Classification of the mixture:		**Classification procedure:**
Resp. Sens. 1	H334	Calculation method

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The 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 process, unless specified in the text.

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