



MATERIAL SAFETY DATA SHEET

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1. PRODUCT IDENTIFICATION / NAME

Product Name	Genkem Contact Adhesive
Product Codes and Synonyms	HAN508
Product Description	Solvent-based Synthetic Rubber Adhesive

2. COMPOSITION / INFORMATION ON INGREDIENTS

Substance/preparation	Preparation			
Chemical name	CAS No.	%	EC Number	Classification
Toluene	108-88-3	30-40	203-625-9	F; R11 Xn; R20
Solvent naphtha (petroleum), medium aliph	64742-88-7	25-35	265-191-7	Xn; R65
Acetone	67-64-1	5-15	200-662-2	F; R11 Xi; R36 R66, 67
Ethyl Acetate	141-78-6	1-10	205-500-4	F; R11 Xi; R36 R66, 67

3. HAZARDS IDENTIFICATION

The preparation is classified as dangerous according to Directive 1999/45/EC and its amendments.

Classification	Xn; R20
Effect and symptoms	Hazardous in case of skin contact (permeator) of ingestion, of inhalation.
Aggravating conditions	Repeated or prolonged exposure is not known to aggravate any medical condition.

4. FIRST -AID MEASURES

Inhalation	If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.
Ingestion	Do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. If large quantities of this material are swallowed, call a physician immediately. Loosen tight clothing such as collar, tie, belt or waistband. Get medical attention if symptoms appear.
Skin contact	Wash with soap and water. Get medical attention if irritation develops.
Eye contact	Check for and remove any contact lenses. In case of contact

immediately flush eyes with plenty of water for at least 15 minutes. Get medical attention.

5. FIREFIGHTING MEASURES

Suitable extinguishing media	SMALL FIRE: Use dry chemical powder LARGE FIRE: Use water spray or fog. Cool containing vessels with water jet to prevent pressure build-up, auto-ignition or explosion.
Hazardous thermal (de)composition products	These products are carbon oxides (CO,CO ₂), halogenated compounds, hydrogen chloride.
Special fire-fighting procedures	Fire fighters should wear positive pressure self-contained breathing apparatus (SCBA) and full turnout gear.
Protection of fire-fighters	Be sure to use an approved/certified respirator or equivalent.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions	Wear suitable protective clothing.
Environmental precautions and clean-up methods	Keep away from heat. Keep away from sources of ignition. Stop leak if without risk. Absorb with DRY earth, sand or other non-combustible material. Do not get water inside container. Do not touch spilled material. Prevent entry into sewers, basements or other confined areas; dike if needed. Call for assistance on disposal.

7. HANDLING AND STORAGE

Handling	Keep away from heat. Keep away from sources of ignition. Ground all equipment containing material. Do not ingest. Do not breathe gas/ fumes/vapor/spray. Avoid contact with eyes. Wear suitable protective clothing. In case of insufficient ventilation, wear suitable respiratory equipment. If ingested seek medical advice immediately and show the container or the label. Avoid contact with skin and eyes. Keep away from incompatibles such as oxidizing agents, reducing agents, organic materials, acids, alkalis.
Storage	Store in a segregated and approved area. Keep container in a cool, well-ventilated area. Keep container tightly closed and sealed until ready for use. Avoid all possible sources of ignition (spark or flame)

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Engineering measures	Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapors below their respective occupational exposure limits. Ensure that eyewash stations and safety showers are proximal to the work-station location.
Hygiene measures	Wash hands, forearms and face thoroughly after handling compounds and before eating, smoking, using lavatory, and at the end of the day.
Occupational exposure limits:	
Ingredient Name	Occupational Exposure Limits
Toluene	ACGIH (United States, 1996). Skin TWA: 50ppm

	TWA: 188 mg/m ³ ACGIH TLV (United States, 2003). Skin Notes: 1996 Adoption Refers to Appendix A—Carcinogens TWA: 188 mg/m ³ 8 hours TWA: 50 ppm 8 hours ACGIH (United States) STEL: 200 ppm TWA: 100 ppm EU OEL (Europe 2000).Notes: indicative TWA: 1210 mg/m ³ 8 hours TWA: 500 ppm 8 hours
Solvent naphtha (petroleum), medium aliph	
Acetone	
Ethyl acetate	ACGIH TLV (United States, 2001). Notes: 1996 Adoption Refers to Appendix A—Carcinogens. 1996 Adoption Refers to Appendix A—Carcinogens. TWA: 1440 mg/m ³ 8 hours TWA: 400 ppm 8 hours
Personal protective equipment:	
Respiratory system	Vapor respirator. Be sure to use an approved/certified respirator or equivalent. Wear appropriate respirator when ventilation is inadequate.
Skin and body	Lab coat
Hands	Gloves
Eyes	Safety glasses

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State	Liquid (Clear viscous liquid)
Colour	Beige (Light)
Odour	Sweet and pungent (strong)
Odour threshold	The lowest known value is 1.6 ppm (Toluene)Weighted average: 23.47 ppm
Boiling point	50 to 110°C (122 to 230°F)
Melting point	May start to solidify at -83.95°C (-119.1°F) based on data for Ethyl Acetate. Weighted average -93.7°C (-136.7°F)
Density	0.85g/cm ³
Vapour density	The highest known value is 4.8 (Air =1) (Solvent naphtha (Petroleum), medium aliph) weighted average 3.61 (Air =1)
Vapour pressure	The highest known value is 24.8 kPa (186.2 mmHg) (at 20°C) (Acetone) Weighted average 5.27 kPa (39.53 mmHg) (at 20°C)
Evaporation rate (Butyl Acetate = 1)	The highest known value is 6.06 (Acetone) Weighted average: 5.66 compared to (n-Butyl Acetate=1)
Solubility	Easily soluble in methanol, diethyl ether, n-Octanol. Insoluble in cold water, hot water.
Octanol/water partition coefficient	This product is much more soluble in Octanol
pH	Neutral
Flash point	The lowest know value is Closed Cup: -18.1°C (-0.6°F) Open Cup: -15.556°C (4°F) (Cleveland) (Acetone)
Fire hazards presence of various substances	Highly flammable in presence of open flames, sparks and static discharge, oxidizing materials. Flammable in presence of heat, of combustible materials, of moisture. Slightly flammable to flammable in presence of reducing materials.
Auto-ignition temperature	The lowest known value is 425.9°C (798.6°F)(Ethyl Acetate)

Explosive properties

Highly explosive in presence of oxidizing materials. Slightly explosive in presence of open flames, sparks and static discharge.

Lower explosion limit

The greatest known range is Lower: 2.6% Upper: 12.8% (Acetone)

10. STABILITY & REACTIVITY**Stability**

This product is stable

Materials to avoid

Highly reactive with oxidizing materials, organic materials. Reactive with reducing agents, acids, alkalis. Slightly reactive to reactive with metals, moisture,

Hazardous Decomposition Products

These products are carbon oxides (CO,CO₂), halogenated compounds, hydrogen chloride.

Hazardous polymerization

Will not occur

11. TOXICOLOGICAL INFORMATION**Potential Acute Health Effects:****Eyes**

Hazardous in case of eye contact (irritant)

Skin

Hazardous in case of skin contact (permeator)

Inhalation

Hazardous in case of inhalation.

Ingestion

Hazardous in case of ingestion

Routes of Entry

Absorbed through skin. Dermal contact, eye contact, inhalation, ingestion

Target Organs

Contains material which causes damage to the following organs: blood, kidneys, lungs, nervous system, , liver, , upper respiratory tract, skin, central nervous system (CNS), eye, lens or cornea.

Acute toxicity:**Ingredient Name****Test****Result****Route****Species**

Toluene

LD50

636 mg/kg

Oral

Rat

LD50

12210 mg/kg

Dermal

Rabbit

LDLo

50 mg/kg

Oral

Human

LC50

8000 (4 hours)

Inhalation

Rat

Acetone

LD50

5800 mg/kg

Oral

Rat

LD50

5340 mg/kg

Oral

Rabbit

LD50

20000 mg/kg

Dermal

Rabbit

LC50

29853 (4 hours)

Inhalation

Rat

Ethyl Acetate

LD50

5620 mg/kg

Oral

Rat

LD50

4935 mg/kg

Oral

Rabbit

LD50

4100 mg/kg

Oral

Mouse

LC50

19596 (4 hours)

Inhalation

Rat

Special Remarks on Chronic Effects on Humans

Inhalation of vapors may cause dizziness, an irregular heartbeat, narcosis, nausea or asphyxiation (Toluene)

Special Remarks on other Toxic Effects on Humans

Exposure can cause lung irritation, chest pain and oedema which may be fatal. (Toluene)

12. ECOLOGICAL INFORMATION**Eco-toxicity Data:****Ingredient Name****Species****Period****Result**

Toluene

Daphnia magna (EC50)

48 hours

6 mg/l

Daphnia magna (EC50)

48 hours

6.56 mg/l

Acetone	Oncorhynchus mykiss (EC50)	48 hours	6.78 mg/l
	Oncorhynchus mykiss (LC50)	96 hours	5.8 mg/l
	Oncorhynchus mykiss (LC50)	96 hours	6.78 mg/l
	Pimephales promelas (LC50)	96 hours	12.6 mg/l
	Daphnia magna (EC50)	48 hours	23.5 mg/l
	Pimephales promelas (LC50)	48 hours	8990 mg/l
	Daphnia magna (EC50)	48 hours	13500 mg/l
	Pimephales promelas (LC50)	96 hours	>100 mg/l
	Daphnia magna (LC50)	96 hours	>100 mg/l
	Oncorhynchus mykiss (LC50)	96 hours	5540 mg/l
Ethyl Acetate	Pimephales promelas (EC50)	48 hours	260 mg/l
	Scenedesmus subspicatus (EC50)	48 hours	3300 mg/l
	Scenedesmus subspicatus (EC50)	48 hours	5600 mg/l
	Pimephales promelas (LC50)	96 hours	230 mg/l
	Oncorhynchus mykiss (LC50)	96 hours	425.3 mg/l
	Oncorhynchus mykiss (LC50)	96 hours	484 mg/l
Persistence/degradability		Readily biodegradable	
Bioaccumulative potential		Low	

Ingredient Name	Persistence/degradability				Bio-accum. potential	
	BODs	Aquatic Half- Life	Photolysis	Biodegradability	BFC	Potential
Toluene		< 28 days		Readily	13	Low
Acetone		<100 days	80 days	Readily	1	Low
Ethyl Acetate	>1g 0 ₂ /g	<730 days pH7 25°C	9.4 days	Inherent	3.2	Low

13. DISPOSAL CONSIDERATIONS

Methods of disposal Type: Hazardous chemical waste.
Disposal: via incineration

14. TRANSPORT INFORMATION

Local/International transport regulations:

Regulatory Information	UN number	Proper Shipping Name	Class	Packing Group
ADR/SABS 0228 Class	UN1133	ADHESIVES, containing flammable liquid (Toluene, Solvent naphtha (petroleum) medium aliph)	3	II
IMDG Class	UN1133	ADHESIVES, containing flammable liquid (Toluene, Solvent naphtha (petroleum) medium aliph)	3	II
IATA-DGR Class	UN1133	ADHESIVES, containing flammable liquid (Toluene, Solvent naphtha (petroleum) medium aliph)	3	II

15. REGULATORY INFORMATION

SABS 0263 /EU Regulations:

Classification Harmful
Risk Phrases R20 –Harmful by inhalation

Safety phrases

S2 – Keep out of reach of children

S46 – If swallowed, seek medical advice immediately and show this label.

Product use

Classification and labeling have been performed according to EU directives 67/548/EEC. 1999/45/EC including amendments and the intended use. Consumer applications.

16. OTHER INFORMATION**Full text of R-Phrases with no appearing in Section 2**

R11 – Highly flammable

R20 – Harmful by inhalation

R65 – Harmful: may cause lung damage if swallowed.

R36 – Irritating to eyes

R66 – Repeated exposure may cause skin dryness or cracking.

R67 – Vapors may cause drowsiness or dizziness.

Text of classification appearing in Section 2

F - Highly flammable

Xn – Harmful

Xi – Irritant

NOTICE TO READER

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