M745-2005 Activator Spray SDS A

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations
SDS ID: 101490
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SECTION 1: Identification

1.1. Identification

Product form : Mixture
Product name : M745-2005 Activator Spray SDS A
Product code : M745-2005

1.2. Recommended use and restrictions on use

Use of the substance/mixture : Solvent based activator to increase cure speed of cyanoacrylate adhesives

1.3. Supplier

SUPPLIER
RPM Industrial Coatings Group
2220 US Highway 70 SE, Ste 100
Hickory, NC 28602
Phone: 828-728-8266
Fax: 828-728-2409

Website: www.rpmicg.com

1.4. Emergency telephone number

Emergency number : CHEMTREC (800) 424-9300
CHEMTREC® International Emergency number: 703-527-3887

SECTION 2: Hazard(s) identification

2.1. Classification of the substance or mixture

GHS US classification

Flammable liquids Category 2	H225	Highly flammable liquid and vapor
Skin corrosion/irritation Category 2	H315	Causes skin irritation
Specific target organ toxicity — Single exposure, Category 3, Narcosis	H336	May cause drowsiness or dizziness
Aspiration hazard Category 1	H304	May be fatal if swallowed and enters airways
Hazardous to the aquatic environment - Acute Hazard Category 1	H400	Very toxic to aquatic life
Hazardous to the aquatic environment - Chronic Hazard Category 1	H410	Very toxic to aquatic life with long lasting effects

Full text of H statements : see section 16

2.2. GHS Label elements, including precautionary statements

GHS US labeling

Hazard pictograms (GHS US) :

Signal word (GHS US) : Danger
Hazard statements (GHS US) : H225 - Highly flammable liquid and vapor
H304 - May be fatal if swallowed and enters airways
H315 - Causes skin irritation
H336 - May cause drowsiness or dizziness
H400 - Very toxic to aquatic life
H410 - Very toxic to aquatic life with long lasting effects

Precautionary statements (GHS US) : P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P243 - Take precautionary measures against static discharge.
P261 - Avoid breathing fume, vapors, mist, spray.
P264 - Wash hands thoroughly after handling.
P271 - Use only outdoors or in a well-ventilated area.
P273 - Avoid release to the environment.
P280 - Wear eye protection, protective clothing, protective gloves.
P304+P340 - If inhaled: Remove person to fresh air and keep comfortable for breathing.
P303+P361+P353 - If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
P332+P313 - If skin irritation occurs: Get medical advice/attention.
P362 - Take off contaminated clothing and wash before reuse.
P370+P378 - In case of fire: Use media other than water to extinguish.
P391 - Collect spillage.
P403+P233 - Store in a well-ventilated place. Keep container tightly closed.
P235 - Keep cool.
P405 - Store locked up.
P501 - Dispose of contents/container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation.

2.3. Other hazards which do not result in classification

Other hazards which do not result in classification : In use, may form flammable/explosive vapor-air mixture.

2.4. Unknown acute toxicity (GHS US)

Not applicable

SECTION 3: Composition/Information on ingredients

3.1. Substances

Not applicable

3.2. Mixtures

Name	Product identifier	%	GHS US classification
n-heptane	CAS-No.: 142-82-5	≥ 90	Flam. Liq. 2, H225 Skin Irrit. 2, H315 STOT SE 3, H336 Asp. Tox. 1, H304 Aquatic Acute 1, H400 Aquatic Chronic 1, H410

Full text of hazard classes and H-statements : see section 16

SECTION 4: First-aid measures

4.1. Description of first aid measures

First-aid measures general : Never give anything by mouth to an unconscious person. Immediately remove contaminated clothing or footwear. Wash contaminated clothing before reuse. If you feel unwell, seek medical advice (show the label where possible).

First-aid measures after inhalation : Remove person to fresh air and keep comfortable for breathing. Allow the victim to rest. Give oxygen or artificial respiration if necessary.

First-aid measures after skin contact : Remove/Take off immediately all contaminated clothing. Wash immediately with plenty of soap and water.

First-aid measures after eye contact : Immediately flush eyes thoroughly with water for at least 15 minutes. Obtain medical attention if pain, blinking or redness persists.

First-aid measures after ingestion : Rinse mouth. Do NOT induce vomiting. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Obtain emergency medical attention.

4.2. Most important symptoms and effects (acute and delayed)

Potential Adverse human health effects and symptoms : Prolonged or repeated skin contact with the material will remove natural oils which leads to a dermatitis.

Symptoms/effects after inhalation : May cause drowsiness or dizziness. May cause headache, nausea and irritation of respiratory tract.

Symptoms/effects after skin contact : Causes skin irritation. Repeated or prolonged contact may cause sensitization of the skin (dermatitis, reddening,...).

Symptoms/effects after eye contact : May cause slight irritation.

Symptoms/effects after ingestion : Aspiration of the product into the lungs may cause very serious pneumonia. May be fatal if swallowed and enters airways.

Most Important Symptoms/Effects : Repeated exposure may cause skin dryness or cracking.

4.3. Immediate medical attention and special treatment, if necessary

An eyewash station to Standard Z358.1-2014 should be available on the premises.

SECTION 5: Fire-fighting measures

5.1. Suitable (and unsuitable) extinguishing media

Suitable extinguishing media : Dry powder. Carbon dioxide. alcohol resistant foam. Sand.

Unsuitable extinguishing media : Do not use a solid water stream as it may scatter and spread fire.

5.2. Specific hazards arising from the chemical

Fire hazard : Highly flammable liquid and vapor. Product can accumulate electrostatic charges that may cause fire by electrical discharges. Floats on water.

Explosion hazard : May form flammable/explosive vapor-air mixture.

Hazardous decomposition products in case of fire : Upon combustion: CO and CO_2 are formed.

5.3. Special protective equipment and precautions for fire-fighters

Firefighting instructions : In case of fire: Evacuate area. Fight fire remotely due to the risk of explosion. Use water spray or fog for cooling exposed containers. Prevent fire-fighting water from entering environment. Exercise caution when fighting any chemical fire.

Protection during firefighting : Do not enter fire area without proper protective equipment, including respiratory protection.

Other information : Do not allow run-off from fire fighting to enter drains or water courses.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General measures : Remove ignition sources. Use special care to avoid static electric charges. No open flames. No smoking.

6.1.1. For non-emergency personnel

Protective equipment : Protective clothing. Protective goggles. Safety glasses. Gloves.

Emergency procedures : Evacuate unnecessary personnel. Keep upwind. Seal off low-lying areas. Large spills/in confined spaces: consider evacuation.

6.1.2. For emergency responders

Protective equipment : Equip cleanup crew with proper protection.

Emergency procedures : Ventilate area. Take precautionary measures against static discharge. Evacuate unnecessary personnel. Mark out the contaminated area with signs and prevent access to unauthorized personnel. Cover spill with non combustible material, e.g.: sand/earth.

6.2. Environmental precautions

Prevent entry to sewers and public waters. Notify authorities if liquid enters sewers or public waters.

6.3. Methods and material for containment and cleaning up

For containment : Contain any spills with dikes or absorbents to prevent migration and entry into sewers or streams.

Methods for cleaning up : Soak up spills with inert solids, such as clay or diatomaceous earth as soon as possible. Use non-sparking tools. Store away from other materials.

Other information : For further information refer to section 13.

6.4. Reference to other sections

See Heading 8. Exposure controls and personal protection. For further information refer to section 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Additional hazards when processed : Handle empty containers with care because residual vapors are flammable.

Precautions for safe handling : Provide local exhaust or general room ventilation. Avoid contact with skin, eyes and clothing. Avoid breathing fume, vapors, mist, spray. No open flames. No smoking. Use only non-sparking tools.

Hygiene measures : Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Handle in accordance with good industrial hygiene and safety procedures.

7.2. Conditions for safe storage, including any incompatibilities

Technical measures : Take precautionary measures against static discharge. Use explosion-proof ventilating, lighting equipment.

Storage conditions : Keep only in the original container in a cool, well ventilated place away from : Heat sources, open flames, Sources of ignition, Direct sunlight. Keep in fireproof place. Keep container tightly closed.

Incompatible products : Strong bases. Strong acids. Oxidizing agent.

Incompatible materials : Sources of ignition. Direct sunlight. Heat sources.

Storage area : Store in a well-ventilated place. Storage class (LGK, TRGS 510).

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

M745-2005 Activator Spray	
USA - ACGIH - Occupational Exposure Limits	
Local name	Heptane, isomers (n-Heptane)
ACGIH OEL TWA [ppm]	400 ppm
ACGIH OEL STEL [ppm]	500 ppm
Remark (ACGIH)	TLV® Basis: CNS impair; URT irr
Regulatory reference	ACGIH 2021

M745-2005 Activator Spray	
USA - OSHA - Occupational Exposure Limits	
Local name	Heptane (n-Heptane)
OSHA PEL (TWA) [1]	2000 mg/m³
OSHA PEL (TWA) [2]	500 ppm
Regulatory reference (US-OSHA)	OSHA Annotated Table Z-1

heptane (142-82-5)	
USA - ACGIH - Occupational Exposure Limits	
Local name	Heptane, isomers (n-Heptane)
ACGIH OEL TWA [ppm]	400 ppm
ACGIH OEL STEL [ppm]	500 ppm
Remark (ACGIH)	TLV® Basis: CNS impair; URT irr
Regulatory reference	ACGIH 2021
USA - OSHA - Occupational Exposure Limits	
Local name	Heptane (n-Heptane)
OSHA PEL (TWA) [1]	2000 mg/m³
OSHA PEL (TWA) [2]	500 ppm
Regulatory reference (US-OSHA)	OSHA Annotated Table Z-1

8.2. Appropriate engineering controls

Appropriate engineering controls : Avoid contact with skin and eyes. Provide adequate general and local exhaust ventilation. Not less than 3 air exchanges per hour. Use spark-/explosionproof appliances and lighting system.

Environmental exposure controls : The floor of the depot must be impermeable, non-combustible and designed to form a basin, in order that stored flammable liquids should not, under any circumstances, be released outside.

8.3. Individual protection measures/Personal protective equipment

Personal protective equipment:
Avoid all unnecessary exposure. Gloves. Protective clothing. Protective goggles.

Materials for protective clothing:
anti-static clothing in natural material or heat resistant synthetic material

Hand protection:				
Chemically resistant protective gloves				
Type	**Material**	**Permeation**	**Thickness (mm)**	**Penetration**
Reusable gloves	Nitrile rubber (NBR)	6 (> 480 minutes)	0.4mm	

Eye protection:		
Chemical goggles or face shield. USA (NIOSH)		
Type	**Field of application**	**Characteristics**
Safety goggles	Droplet	Indirect-ventilated
Face shield	Droplet	clear

Skin and body protection:
Wear suitable protective clothing

Respiratory protection:		
Wear respiratory protection.		
Device	**Filter type**	**Condition**
Reusable half mask	ABEK	If conc. in air > exposure limit

Personal protective equipment symbol(s):

Other information:
Do not eat, drink or smoke during use.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	:	Liquid
Appearance	:	Clear, colorless liquid.
Color	:	clear
Odor	:	mild aliphatic hydrocarbons
Odor threshold	:	No data available
pH	:	No data available
Melting point	:	No data available
Freezing point	:	No data available
Boiling point	:	94 – 98 °C
Flash point	:	-4 °C
Relative evaporation rate (butyl acetate=1)	:	4.2
Flammability (solid, gas)	:	Highly flammable liquid and vapor.
Vapor pressure	:	53 hPa(a) @68°F
Relative vapor density at 20 °C	:	3.1
Relative density	:	~ 0.69
Solubility	:	Negligible.
Partition coefficient n-octanol/water (Log Pow)	:	No data available
Auto-ignition temperature	:	254 °C
Decomposition temperature	:	No data available
Viscosity, kinematic	:	≈ 0.5 mm²/s
Viscosity, dynamic	:	No data available
Explosion limits	:	1.1 – 7 vol %
Explosive properties	:	In use, may form flammable/explosive vapor-air mixture.
Oxidizing properties	:	Not oxidising.

9.2. Other information

VOC content	:	100 %

SECTION 10: Stability and reactivity

10.1. Reactivity

No reactivity hazard other than the effects described in sub-sections below.

10.2. Chemical stability

Highly flammable liquid and vapor. May form flammable/explosive vapor-air mixture.

10.3. Possibility of hazardous reactions

Liquids/vapors may ignite or react with other materials.

10.4. Conditions to avoid

Sources of ignition. Heat. Open flame. Extremely high or low temperatures. Direct sunlight.

10.5. Incompatible materials

Strong acids. Strong bases. Oxidizing agent.

10.6. Hazardous decomposition products

fume. Carbon monoxide. Carbon dioxide. May release flammable gases.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity (oral) : Not classified (Based on available data, the classification criteria are not met)
Acute toxicity (dermal) : Not classified (Based on available data, the classification criteria are not met)
Acute toxicity (inhalation) : Not classified (Based on available data, the classification criteria are not met)

heptane (142-82-5)	
LD50 oral rat	> 5000 mg/kg body weight (Equivalent or similar to OECD 401, Rat, Male / female, Read-across, Oral, 14 day(s))
LD50 dermal rabbit	> 2000 mg/kg body weight (Equivalent or similar to OECD 402, 24 h, Rabbit, Male / female, Read-across, Dermal, 14 day(s))
LC50 Inhalation - Rat	> 29.29 mg/l (Equivalent or similar to OECD 403, 4 h, Rat, Male / female, Experimental value, Inhalation (vapours))

Skin corrosion/irritation : Causes skin irritation.
Serious eye damage/irritation : Not classified (Based on available data, the classification criteria are not met)
Respiratory or skin sensitization : Not classified (Based on available data, the classification criteria are not met)
Germ cell mutagenicity : Not classified (Based on available data, the classification criteria are not met)
Carcinogenicity : Not classified (Based on available data, the classification criteria are not met)
Reproductive toxicity : Not classified (Based on available data, the classification criteria are not met)
STOT-single exposure : May cause drowsiness or dizziness. (Based on available data, the classification criteria are not met)

heptane (142-82-5)	
STOT-single exposure	May cause drowsiness or dizziness.

STOT-repeated exposure : Not classified (Based on available data, the classification criteria are not met)
Aspiration hazard : May be fatal if swallowed and enters airways.
Viscosity, kinematic : ≈ 0.5 mm²/s
Potential Adverse human health effects and symptoms : Prolonged or repeated skin contact with the material will remove natural oils which leads to a dermatitis.
Symptoms/effects after inhalation : May cause drowsiness or dizziness. May cause headache, nausea and irritation of respiratory tract.
Symptoms/effects after skin contact : Causes skin irritation. Repeated or prolonged contact may cause sensitization of the skin (dermatitis, reddening,...).
Symptoms/effects after eye contact : May cause slight irritation.

Symptoms/effects after ingestion : Aspiration of the product into the lungs may cause very serious pneumonia. May be fatal if swallowed and enters airways.

Most Important Symptoms/Effects : Repeated exposure may cause skin dryness or cracking.

SECTION 12: Ecological information

12.1. Toxicity

Ecology - general : Hazardous to the aquatic environment - Chronic Hazard Category 2.

Ecology - water : Substance floats in water

12.2. Persistence and degradability

M745-2005 Activator Spray	
Persistence and degradability	Minimally biodegradable.
BOD (% of ThOD)	3.5 % ThOD

heptane (142-82-5)	
Persistence and degradability	Biodegradable in the soil. Readily biodegradable in water.
Biochemical oxygen demand (BOD)	1.92 g O_2/g substance
Chemical oxygen demand (COD)	0.06 g O_2/g substance
ThOD	3.52 g O_2/g substance

12.3. Bioaccumulative potential

M745-2005 Activator Spray	
Bioaccumulative potential	Low bioaccumulation potential.

heptane (142-82-5)	
BCF - Other aquatic organisms [1]	552 (BCFBAF v3.00, Calculated value)
Partition coefficient n-octanol/water (Log Pow)	4.66 (Experimental value)
Bioaccumulative potential	Potential for bioaccumulation (4 ≥ Log Kow ≤ 5).

12.4. Mobility in soil

M745-2005 Activator Spray	
Ecology - soil	Floats on water. Adsorbs into the soil.

heptane (142-82-5)	
Surface tension	19.66 mN/m (25 °C)
Organic Carbon Normalized Adsorption Coefficient (Log Koc)	2.38 (log Koc, SRC PCKOCWIN v2.0, Calculated value)
Ecology - soil	Low potential for adsorption in soil.

12.5. Other adverse effects

Other information : Avoid release to the environment.

SECTION 13: Disposal considerations

13.1. Disposal methods

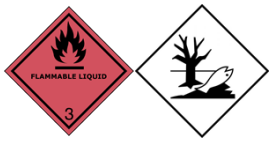
Product/Packaging disposal recommendations : Dispose in a safe manner in accordance with local/national regulations. Liquid product : Remove to an authorized waste incinerator for solvents with energy recovery. Packaging disposal recommendations: a hazardous or special waste collection point, Beware of residues or vapors which remain in the drums.

Additional information : Handle empty containers with care because residual vapors are flammable.

Ecology - waste materials : Avoid release to the environment.

SECTION 14: Transport information

In accordance with DOT / TDG / IMDG / IATA

DOT	TDG	IMDG	IATA
14.1. UN number			
1206	Not applicable	1206	1206
14.2. Proper Shipping Name			
Heptanes (heptane CONTAINS CONTAINS : heptane)	Not applicable	HEPTANES (CONTAINS : heptane)	Heptanes (CONTAINS : heptane)
14.3. Transport hazard class(es)			
3	Not applicable	3	3
 Not applicable			
14.4. Packing group			
II	Not applicable	II	II
14.5. Environmental hazards			
Dangerous for the environment: Yes	Not applicable	Dangerous for the environment: Yes Marine pollutant: Yes	Dangerous for the environment: Yes
No supplementary information available			

14.6. Special precautions for user

DOT

UN-No.(DOT) : UN1206

DOT Special Provisions (49 CFR 172.102)	:	IB2 - Authorized IBCs: Metal (31A, 31B and 31N); Rigid plastics (31H1 and 31H2); Composite (31HZ1). Additional Requirement: Only liquids with a vapor pressure less than or equal to 110 kPa at 50 C (1.1 bar at 122 F), or 130 kPa at 55 C (1.3 bar at 131 F) are authorized. T4 - 2.65 178.274(d)(2) Normal..... 178.275(d)(3) TP2 - a. The maximum degree of filling must not exceed the degree of filling determined by the following: (image) Where: tr is the maximum mean bulk temperature during transport, tf is the temperature in degrees celsius of the liquid during filling, and a is the mean coefficient of cubical expansion of the liquid between the mean temperature of the liquid during filling (tf) and the maximum mean bulk temperature during transportation (tr) both in degrees celsius. b. For liquids transported under ambient conditions may be calculated using the formula: (image) Where: d15 and d50 are the densities (in units of mass per unit volume) of the liquid at 15 C (59 F) and 50 C (122 F), respectively.
DOT Packaging Exceptions (49 CFR 173.xxx)	:	150
DOT Packaging Non Bulk (49 CFR 173.xxx)	:	202
DOT Packaging Bulk (49 CFR 173.xxx)	:	242
DOT Quantity Limitations Passenger aircraft/rail (49 CFR 173.27)	:	5 L
DOT Quantity Limitations Cargo aircraft only (49 CFR 175.75)	:	60 L
DOT Vessel Stowage Location	:	B - (i) The material may be stowed ‘‘on deck’’ or ‘‘under deck’’ on a cargo vessel and on a passenger vessel carrying a number of passengers limited to not more than the larger of 25 passengers, or one passenger per each 3 m of overall vessel length; and (ii) ‘‘On deck only’’ on passenger vessels in which the number of passengers specified in paragraph (k)(2)(i) of this section is exceeded.

TDG

Emergency Response Guide (ERG) Number	:	128

IMDG

Limited quantities (IMDG)	:	1 L
Excepted quantities (IMDG)	:	E2
Packing instructions (IMDG)	:	P001
IBC packing instructions (IMDG)	:	IBC02
Tank instructions (IMDG)	:	T4
Tank special provisions (IMDG)	:	TP2
EmS-No. (Fire)	:	F-E - FIRE SCHEDULE Echo - NON-WATER-REACTIVE FLAMMABLE LIQUIDS
EmS-No. (Spillage)	:	S-D - SPILLAGE SCHEDULE Delta - FLAMMABLE LIQUIDS
Stowage category (IMDG)	:	B
Properties and observations (IMDG)	:	Colourless, volatile liquids. Explosive limits: 1.1% to 6.7% n-HEPTANE: flashpoint -4°C c.c. Immiscible with water. Irritating to skin, eyes and mucous membranes.

IATA

PCA Excepted quantities (IATA)	:	E2
PCA Limited quantities (IATA)	:	Y341
PCA limited quantity max net quantity (IATA)	:	1L
PCA packing instructions (IATA)	:	353
PCA max net quantity (IATA)	:	5L
CAO packing instructions (IATA)	:	364
CAO max net quantity (IATA)	:	60L
ERG code (IATA)	:	3H

14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable

SECTION 15: Regulatory information

15.1. US Federal regulations

Commercial status of components according to the United States Environmental Protection Agency's Toxic Substances Control Act (TSCA):

Name	CAS-No.	Listing	Commercial status	Flags
n-heptane	142-82-5	Present	Active	

heptane (142-82-5)	
SARA Section 311/312 Hazard Classes	Fire hazard Immediate (acute) health hazard

15.2. International regulations

CANADA

No additional information available

EU-Regulations

No additional information available

National regulations

No additional information available

15.3. US State regulations

Component	State or local regulations
n-heptane(142-82-5)	U.S. - New Jersey - Right to Know Hazardous Substance List

SECTION 16: Other information

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations
Revision date : 07/02/2021

Full text of H-phrases	
H225	Highly flammable liquid and vapor
H304	May be fatal if swallowed and enters airways
H315	Causes skin irritation
H336	May cause drowsiness or dizziness
H400	Very toxic to aquatic life
H410	Very toxic to aquatic life with long lasting effects

Hazard Rating
Flammability : 4 Severe Hazard - Flammable gases, or very volatile flammable liquids with flash points below 73 F, and boiling points below 100 F. Materials may ignite spontaneously with air. (Class IA)

Indication of changes:			
Section	**Changed item**	**Change**	**Comments**
	Revision date	Modified	
	Supersedes	Modified	
2.3	Other hazards which do not result in classification	Added	
4	First-aid measures after ingestion	Modified	
4	First-aid measures general	Modified	
4	Symptoms/effects after inhalation	Modified	
4	Symptoms/effects	Modified	
4	Symptoms/effects after skin contact	Modified	
5.2	Fire hazard	Modified	
5.3	Firefighting instructions	Modified	
6	Emergency procedures	Modified	
9	Explosive properties	Modified	
9	Oxidizing properties	Modified	
9	Boiling point	Modified	

Safety Data Sheet (SDS), USA

DISCLAIMER OF LIABILITY The information in this SDS was obtained from sources which we believe are reliable. However, the information is provided without any warranty, express or implied, regarding its correctness. The conditions or methods of handling, storage, use or disposal of the product are beyond our control and may be beyond our knowledge. For this and other reasons, we do not assume responsibility and expressly disclaim liability for loss, damage or expense arising out of or in any way connected with the handling, storage, use or disposal of the product. This SDS was prepared and is to be used only for this product. If the product is used as a component in another product, this SDS information may not be applicable

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

1.1. Product identifier

M745-2005 Activator SDS B

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

Use of the substance/mixture

Industrial and professional use.

Uses advised against

any non-intended use.

1.3. Details of the supplier of the safety data sheet

Company name:	RPM Industrial Coatings Group
Place:	2220 US Highway 70 SE, Ste 100 Hickory, NC 28602
Telephone:	T: 828-728-8266; F: 828-728-2409
Internet:	www.rpmicg.com
Responsible Department:	

1.4. Emergency telephone number:

Chemtrec 1-800-262-8200

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Regulation (EC) No. 1272/2008

Hazard categories:
Flammable liquid: Flam. Liq. 2
Serious eye damage/eye irritation: Eye Irrit. 2
Specific target organ toxicity - single exposure: STOT SE 3
Hazard Statements:
Highly flammable liquid and vapour.
Causes serious eye irritation.
May cause drowsiness or dizziness.

2.2. Label elements

Regulation (EC) No. 1272/2008

Hazardous components which must be listed on the label

Heptane

Signal word: Danger

Pictograms:

Hazard statements

H225	Highly flammable liquid and vapour.
H319	Causes serious eye irritation.
H336	May cause drowsiness or dizziness.

Precautionary statements

P210	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P312	Call a POISON CENTER/doctor if you feel unwell.
P337+P313	If eye irritation persists: Get medical advice/attention.
P370+P378	In case of fire: Use Water spray. Carbon dioxide. Extinguishing powder. Dry extinguishing powder. alcohol resistant foam. to extinguish.

P403+P233 Store in a well-ventilated place. Keep container tightly closed.
P501 Dispose of waste according to applicable legislation.

Special labelling of certain mixtures

EUH066 Repeated exposure may cause skin dryness or cracking.

2.3. Other hazards

In case of insufficient ventilation and/or through use, explosive/highly flammable mixtures may develop.

SECTION 3: Composition/information on ingredients

3.2. Mixtures

Hazardous components

CAS No	Chemical name			Quantity
	EC No	Index No	REACH No	
	Classification according to Regulation (EC) No. 1272/2008 [CLP]			
142-82-5	Heptane			50 - 100 %
	200-662-2	606-001-00-8		
	Flam. Liq. 2, Eye Irrit. 2, STOT SE 3; H225 H319 H336 EUH066			
99-97-8	N,N-dimethyl-p-toluidine			1 - < 5 %
	202-805-4	612-056-00-9		
	Acute Tox. 3, Acute Tox. 3, Acute Tox. 3, STOT RE 2, Aquatic Chronic 3; H331 H311 H301 H373 ** H412			

Full text of H and EUH statements: see section 16.

Further Information

Product does not contain listed SVHC substances > 0,1 % according to Regulation (EC) No. 1907/2006 Article 59 (REACH)

SECTION 4: First aid measures

4.1. Description of first aid measures

General information

In case of accident or unwellness, seek medical advice immediately (show directions for use or safety data sheet if possible).

After inhalation

In case of accident by inhalation: remove casualty to fresh air and keep at rest. In all cases of doubt, or when symptoms persist, seek medical advice.

After contact with skin

After contact with skin, wash immediately with plenty of water and soap. Change contaminated clothing. In case of skin irritation, consult a physician.

After contact with eyes

Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Consult an ophthalmologist.

After ingestion

Rinse mouth thoroughly with water. Let water be drunken in little sips (dilution effect). In all cases of doubt, or when symptoms persist, seek medical advice.

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

Inhalation causes narcotic effects/intoxication.

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

Water spray. Carbon dioxide. Extinguishing powder. Dry extinguishing powder. alcohol resistant foam.

Unsuitable extinguishing media

High power water jet. High power water jet.

5.2. Special hazards arising from the substance or mixture

Combustible. Vapours may form explosive mixtures with air.
Can be released in case of fire: Carbon monoxide. Carbon dioxide (CO_2).

5.3. Advice for firefighters

Wear a self-contained breathing apparatus and chemical protective clothing.

Additional information

Use water spray jet to protect personnel and to cool endangered containers. Collect contaminated fire extinguishing water separately. Do not allow entering drains or surface water. In case of fire and/or explosion do not breathe fumes.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Wear personal protection equipment. (See section 8.)
Remove all sources of ignition. Remove persons to safety. Ventilate affected area. Due to danger of explosion, prevent leakage of vapours into cellars, flues and ditches.
Avoid contact with skin, eyes and clothes. Do not breathe gas/vapour/aerosol.

6.2. Environmental precautions

Cover drains.
Prevent spread over a wide area (e.g. by containment or oil barriers). Do not allow to enter into surface water or drains. Due to danger of explosion, prevent leakage of vapours into cellars, flues and ditches.

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).
Treat the recovered material as prescribed in the section on waste disposal.
Clean contaminated objects and areas thoroughly observing environmental regulations.

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 as well as local exhaustion at critical locations.
Wear personal protection equipment. (refer to chapter 8)

Advice on protection against fire and explosion

Keep away from sources of ignition. - No smoking. Take precautionary measures against static discharges. Heating causes rise in pressure with risk of bursting. Flammable vapours can accumulate in head space of closed systems.

Further information on handling

Avoid contact with skin, eyes and clothes. Do not breathe gas/vapour/aerosol.
General protection and hygiene measures: refer to chapter 8

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. Protect against direct sunlight.

Advice on storage compatibility

Do not store together with: Gas. Explosives. Flammable solids. Pyrophoric liquids and solids. Self-heating substances and mixtures. Substances and mixtures which, in contact with water, emit flammable gases. Oxidizing liquids. Oxidizing solids. ammonium nitrate. Self-reactive substances and mixtures. Organic peroxides. Non-combustible toxic substances. Radioactive substances. Infectious substances.

Further information on storage conditions

Recommended storage temperature: 20°C
Protect against: Light. heat. Cold. moisture. UV-radiation/sunlight.

7.3. Specific end use(s)

refer to section 1.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Exposure limits (EH40)

CAS No	Substance	ppm	mg/m³	fibres/ml	Category	Origin
142-82-5	Heptane	500	1210		TWA (8 h)	WEL
		1500	3620		STEL (15 min)	WEL

8.2. Exposure controls

Appropriate engineering controls

If handled uncovered, arrangements with local exhaust ventilation have to be used.
If local exhaust ventilation is not possible or not sufficient, the entire working area should be ventilated by technical means.
When workers are facing concentrations above the exposure limit they must use appropriate certified respirators.

Protective and hygiene measures

Always close containers tightly after the removal of product. When using do not eat, drink, smoke, sniff. Wash hands before breaks and after work. Keep away from food, drink and animal feedingstuffs. Protect skin by using skin protective cream.

Eye/face protection

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

Hand protection

Wear suitable gloves. DIN EN 374
Suitable material:
Butyl rubber. - Thickness of glove material: 0,5 mm
(Breakthrough time > 4 h)
penetration time (maximum wearing period): >= ~160 min.
In the case of wanting to use the gloves again, clean them before taking off and air them well. Before using check leak tightness / impermeability.
For special purposes, it is recommended to check the resistance to chemicals of the protective gloves mentioned above together with the supplier of these gloves.

Skin protection

Protective clothing.
Minimum standard for preventive measures while handling with working materials are specified in the TRGS 500.

Respiratory protection

With correct and proper use, and under normal conditions, breathing protection is not required.
Respiratory protection necessary at:
exceeding exposure limit values
Suitable respiratory protective equipment: Protective respiration apparatus not using surrounding air (breathing apparatus) (DIN EN 133).

Environmental exposure controls

Do not allow to enter into surface water or drains.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state:	liquid
Colour:	colourless
Odour:	characteristic

		Test method
pH-Value:	not determined	
Changes in the physical state		
Melting point:	not determined	
Initial boiling point and boiling range:	56 °C	
Sublimation point:	not determined	
Softening point:	not determined	
Pour point:	not determined	
Flash point:	< -20 °C	
Sustaining combustion:	No data available	
Flammability		
Gas:	not determined	
Explosive properties		
In use, may form flammable/explosive vapour-air mixture.		
Lower explosion limits:	2,5 vol. %	
Upper explosion limits:	14,3 vol. %	
Ignition temperature:	370 °C	
Auto-ignition temperature		
Gas:	not determined	
Oxidizing properties		
none		
Vapour pressure: (at 20 °C)	246 hPa	
Vapour pressure: (at 50 °C)	814 hPa	
Density (at 20 °C):	0,79 g/cm³	
Water solubility:	not miscible - partially miscible	
Solubility in other solvents		
miscible.		
Partition coefficient:	not determined	
Viscosity / dynamic: (at 20 °C)	not determined	

Viscosity / kinematic:	No information available.
Flow time: (at 20 °C)	not determined
Vapour density:	No information available.
Solvent separation test:	not determined
Solvent content:	50-100%

9.2. Other information

Solid content:	not determined

No information available.

SECTION 10: Stability and reactivity

10.1. Reactivity

No information available.

10.2. Chemical stability

The product is chemically stable under recommended conditions of storage, use and temperature.

10.3. Possibility of hazardous reactions

Heating causes rise in pressure with risk of bursting. Flammable vapours can accumulate in head space of closed systems. In use, may form flammable/explosive vapour-air mixture.

10.4. Conditions to avoid

Ignition hazard. Keep away from heat. Protect against direct sunlight.

10.5. Incompatible materials

Hydrogen peroxide, bromine trifluoride, Difluordioxid, 2-methyl-1,3-butadiene, nitromethane, nitrosyl chloride (catalyst), Nitrosylperchlorat, alkali hydroxide, bromine, fluorine, sodium, strong reducing agents, nitric acid, chromic acid, chromium trioxide, chromyl chloride, ethanolamine, Potassium tert-butoxide. Oxidizing agents, strong.

10.6. Hazardous decomposition products

Can be released in case of fire: Carbon monoxide. Carbon dioxide (CO_2).

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Toxicocinetics, metabolism and distribution

No information available.

Acute toxicity

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

CAS No	Chemical name				
	Exposure routes	Method	Dose	Species	Source
142-82-5	heptane				
	oral	LD50	5800 mg/kg	Rat	ECHA Dossier
	dermal	LD50	7400 mg/kg	Rabbit	ECHA Dossier
	inhalative (4 h) vapour	LC50	50,1 mg/l	Rat	RTECS
99-97-8	N,N-dimethyl-p-toluidine				
	oral	ATE	100 mg/kg		
	dermal	LD50	>2000 mg/kg	Rat	ECHA Dossier
	inhalative (4 h) vapour	LC50	1,4 mg/l	Rat	GESTIS
	inhalative aerosol	ATE	0,5 mg/l		

Irritation and corrosivity

Causes serious eye irritation.
Irritant effect on the eye: Irritant.
Irritant effect on the skin: Not an irritant.

Sensitising effects

Based on available data, the classification criteria are not met.
no danger of sensitization.
The statement is derived from the properties of the single components.

STOT-single exposure

May cause drowsiness or dizziness. (heptane; propan-2-one; propanone)

Severe effects after repeated or prolonged exposure

Repeated exposure may cause skin dryness or cracking.
Heptane:
Subchronic oral toxicity (90d): NOAEL = 900 mg/m3 (Rat)

Carcinogenic/mutagenic/toxic effects for reproduction

Based on available data, the classification criteria are not met.
Heptane:
No experimental indications of mutagenicity in-vitro exist. literature infomation: ECHA Dossier
Developmental toxicity/teratogenicity (Rat) NOAEL = 11000 ppm; literature infomation: 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
142-82-5	heptane					
	Acute fish toxicity	LC50	5540 mg/l	96 h	Onchorhynchus mykiss	ECHA Dossier
	Acute crustacea toxicity	EC50	8800 mg/l	48 h	Daphnia pulex	ECHA Dossier
99-97-8	N,N-dimethyl-p-toluidine					
	Acute fish toxicity	LC50	46-53 mg/l	96 h	Pimephales promelas	GESTIS

12.2. Persistence and degradability

CAS No	Chemical name			
	Method	Value	d	Source
	Evaluation			
142-82-5	heptane			
	OECD 301B / ISO 9439 / EEC 92/69 annex V, C.4-C	90	28	ECHA Dossier
	Product is biodegradable.			

12.3. Bioaccumulative potential

Partition coefficient n-octanol/water

CAS No	Chemical name	Log Pow
142-82-5	heptane	-0,24
99-97-8	N,N-dimethyl-p-toluidine	2,81

12.4. Mobility in soil

No information available.

12.5. Results of PBT and vPvB assessment

The components in this formulation do not meet the criteria for classification as PBT or vPvB.

12.6. Other adverse effects

No information available.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Advice on disposal

Observe in addition any national regulations! Consult the local waste disposal expert about waste disposal. Non-contaminated packages may be recycled. According to EAKV, allocation of waste identity numbers/waste descriptions must be carried out in a specific way for every industry and process.
Control report for waste code/ waste marking according to EAKV:

Waste disposal number of waste from residues/unused products

160305 WASTES NOT OTHERWISE SPECIFIED IN THE LIST; off-specification batches and unused products; organic wastes containing hazardous substances
Classified as hazardous waste.

Waste disposal number of used product

160305 WASTES NOT OTHERWISE SPECIFIED IN THE LIST; off-specification batches and unused products; organic wastes containing hazardous 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 hazardous substances
Classified as hazardous waste.

Contaminated packaging

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

SECTION 14: Transport information

Land transport (ADR/RID)

14.1. UN number: UN 1993

14.2. UN proper shipping name: FLAMMABLE LIQUID, N.O.S. (Heptane)

14.3. Transport hazard class(es): 3

14.4. Packing group: II

Hazard label: 3

Classification code: F1
Special Provisions: 274 601 640D
Limited quantity: 1 L
Excepted quantity: E2
Transport category: 2
Hazard No: 33
Tunnel restriction code: D/E

Inland waterways transport (ADN)

14.1. UN number: UN 1993

14.2. UN proper shipping name: FLAMMABLE LIQUID, N.O.S. (Heptane)

14.3. Transport hazard class(es): 3

14.4. Packing group: II

Hazard label: 3

Classification code: F1
Special Provisions: 274 601 640D
Limited quantity: 1 L
Excepted quantity: E2

Marine transport (IMDG)

14.1. UN number: UN 1993

14.2. UN proper shipping name: FLAMMABLE LIQUID, N.O.S. (Heptane)

14.3. Transport hazard class(es): 3

14.4. Packing group: II

Hazard label: 3

Marine pollutant: NO
Special Provisions: 274
Limited quantity: 1 L
Excepted quantity: E2
EmS: F-E, S-E

Air transport (ICAO)

14.1. UN number: UN 1993

14.2. UN proper shipping name: FLAMMABLE LIQUID, N.O.S. (Heptane)

14.3. Transport hazard class(es): 3

14.4. Packing group: II

Hazard label: 3

Special Provisions:	A3
Limited quantity Passenger:	1 L
Passenger LQ:	Y341
Excepted quantity:	E2

IATA-packing instructions - Passenger:	353
IATA-max. quantity - Passenger:	5 L
IATA-packing instructions - Cargo:	364
IATA-max. quantity - Cargo:	60 L

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

not applicable

SECTION 15: Regulatory information

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

EU regulatory information

2010/75/EU (VOC):	100 % (calculated.)
2004/42/EC (VOC):	790 g/l (calculated.)
Information according to 2012/18/EU (SEVESO III):	P5c FLAMMABLE LIQUIDS

Additional information:

Additional information

This mixture is classified as hazardous according to regulation (EC) No. 1272/2008 [CLP].
REACH 1907/2006 Appendix XVII: 3

National regulatory information

TSCA Inventory Status:	All components are listed or exempt from listing on the TSCA inventory.
California Proposition 65:	No California Proposition 65 listed chemicals are known to be present.

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; 05.23.2020 Initial release

Abbreviations and acronyms

ADR: Accord européen sur le transport des marchandises dangereuses par Route
CAS Chemical Abstracts Service
DNEL: Derived No Effect Level
IARC: INTERNATIONAL AGENCY FOR RESEARCH ON CANCER
International Carriage of Dangerous Goods by Road)
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
GefStoffV: Gefahrstoffverordnung (Ordinance on Hazardous Substances, Germany)
LOAEL: Lowest observed adverse effect level
LOAEC: Lowest observed adverse effect concentration
LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent
NOAEL: No observed adverse effect level
NOAEC: No observed adverse effect level
NTP: National Toxicology Program
N/A: not applicable
OSHA: Concerning the International Transport of Dangerous Goods by Rail)
PNEC: predicted no effect concentration
PBT: Persistent bioaccumulative toxic
RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)
SARA: Superfund Amendments and Reauthorization Act
SVHC: substance of very high concern
TRGS Technische Regeln für Gefahrstoffe
TSCA: Toxic Substances Control Act
VOC: Volatile Organic Compounds
VwVwS: Verwaltungsvorschrift wassergefährdender Stoffe
WGK: Wassergefährdungsklasse

Relevant H and EUH statements (number and full text)

H225	Highly flammable liquid and vapour.
H301	Toxic if swallowed.
H311	Toxic in contact with skin.
H319	Causes serious eye irritation.
H331	Toxic if inhaled.
H336	May cause drowsiness or dizziness.
H373	May cause damage to organs through prolonged or repeated exposure.
H412	Harmful to aquatic life with long lasting effects.
EUH066	Repeated exposure may cause skin dryness or cracking.

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.

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