

Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878 Reference number: 00351 Issue date: 4/10/2024 Revision date: 4/10/2024 Supersedes version of: 4/16/2016 Version: 1.0

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

1.1. Product identifier

: Substance
: 2,2,4-TRIMETHYLPENTANE AR/ACS
: 601-009-00-8
: 208-759-1
: 540-84-1
: 00351
: Hydrocarbons, aliphatic
: C8H18
$H_{3}C \xrightarrow{CH_{3}}{CH_{3}}CH_{3}$

Synonyms

: iso-Octane

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

1.2.1. Relevant identified uses

Industrial/Professional use spec

Use of the substance/mixture

 Industrial For professional use only
 Manufacture of substances Laboratory chemicals Solvents

1.2.2. Uses advised against

No additional information available

1.3. Details of the supplier of the safety data sheet

LOBA CHEMIE PVT.LTD.
107 Wode House Road, Jehangir Villa, Colaba
400005 Mumbai
INDIA
T +91 22 6663 6663, F +91 22 6663 6699
info@lobachemie.com.www.lobachemie.com

1.4. Emergency telephone number

Emergency number

: + 91 22 6663 6663 (9:00am - 6:00 pm)

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

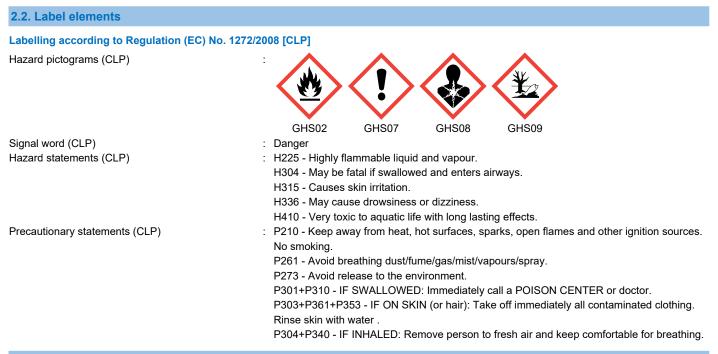
Classification according to Regulation (EC) No. 1272/2008	[CLP]
Flammable liquids, Category 2	H225
Skin corrosion/irritation, Category 2	H315
Specific target organ toxicity – Single exposure, Category 3,	H336
Narcosis	
Aspiration hazard, Category 1	H304
Hazardous to the aquatic environment – Acute Hazard,	H400
Category 1	
Hazardous to the aquatic environment – Chronic Hazard,	H410
Category 1	
Full text of H- and EUH-statements: see section 16	

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Adverse physicochemical, human health and environmental effects

Highly flammable liquid and vapour. May cause drowsiness or dizziness. Causes skin irritation. May be fatal if swallowed and enters airways. Very toxic to aquatic life with long lasting effects.



2.3. Other hazards

Contains no PBT and/or vPvB substances ≥ 0.1% assessed in accordance with REACH Annex XIII

SECTION 3: Composition/information on ingredients		
3.1. Substances		
Substance type	: Mono-constituent	
Name	Product identifier	%
2,2,4-TRIMETHYLPENTANE	CAS-No.: 540-84-1 EC-No.: 208-759-1 EC Index-No.: 601-009-00-8	100
3.2. Mixtures		

Not applicable

SECTION 4: First aid measures	
4.1. Description of first aid measures	
First-aid measures general	: Call a physician immediately.
First-aid measures after inhalation	: Remove person to fresh air and keep comfortable for breathing. Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER/doctor if you feel unwell.
First-aid measures after skin contact	: Wash with plenty of water/ Wash contaminated clothing before reuse. Get medical advice/attention. Rinse skin with water/shower. Take off immediately all contaminated clothing. If skin irritation occurs: Get medical advice/attention.
First-aid measures after eye contact	: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical advice/attention.
First-aid measures after ingestion	: Immediately call a POISON CENTER/doctor. Rinse mouth. Do not induce vomiting. Call a physician immediately.

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4.2. Most important symptoms and effects, both acute and delayed	
Symptoms/effects	: May cause drowsiness or dizziness.
Symptoms/effects after inhalation	May cause drowsiness or dizziness.
Symptoms/effects after skin contact	Causes skin irritation. Irritation.
Symptoms/effects after eye contact	: None under normal conditions.
Symptoms/effects after ingestion	: May be fatal if swallowed and enters airways. Risk of lung oedema.
· · ·	

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 Unsuitable extinguishing media	Carbon dioxide. Dry powder. Foam. Water spray.Do not use extinguishing media containing water.
5.2. Special hazards arising from the subst	ance or mixture
Fire hazard Explosion hazard Hazardous decomposition products in case of fire	 Highly flammable liquid and vapour. May form flammable/explosive vapour-air mixture. Toxic fumes may be released.
5.3. Advice for firefighters	
Firefighting instructions Protection during firefighting	 Fight fire from safe distance and protected location. Do not enter fire area without proper protective equipment, including respiratory protection. Do not enter fire area without proper protective equipment, including respiratory protection. Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing.

SECTION 6: Accidental release measures	
ipment and emergency procedures	
: Remove ignition sources. Use special care to avoid static electric charges. No open flames. No smoking. Stop leak if safe to do so. Notify authorities if product enters sewers or public waters. Absorb spillage to prevent material damage.	
: Wear recommended personal protective equipment.	
: Ventilate spillage area. Evacuate unnecessary personnel. No open flames, no sparks, and no smoking. Avoid breathing dust/fume/gas/mist/vapours/spray. Avoid contact with skin and eyes.	
: Do not attempt to take action without suitable protective equipment. Use personal protective equipment as required. For further information refer to section 8: "Exposure controls/personal protection".	
: Ventilate area. Evacuate unnecessary personnel. Stop leak if safe to do so.	
nt and cleaning up	
: Collect spillage. Contain any spills with dikes or absorbents to prevent migration and entry into sewers or streams. Stop leak without risks if possible.	
: Take up liquid spill into absorbent material. On land, sweep or shovel into suitable containers. Collect spillage. Notify authorities if product enters sewers or public waters.	

Other information

: Dispose of materials or solid residues at an authorized site.

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6.4. Reference to other sections

For further information refer to section 13.

SECTION 7: Handling and storage	
7.1. Precautions for safe handling	
Additional hazards when processed Precautions for safe handling	 Handle empty containers with care because residual vapours are flammable. Avoid contact with skin and eyes. Use only non-sparking tools. Keep away from sources of ignition - No smoking. Use only outdoors or in a well-ventilated area. Do not breathe vapours. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Ground/bond container and receiving equipment. Take precautionary measures against static discharge. Flammable vapours may accumulate in the container. Use explosion-proof equipment. Wear personal protective equipment. Avoid breathing dust/fume/gas/mist/vapours/spray.
Hygiene measures	: Do not eat, drink or smoke when using this product. Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Wash contaminated clothing before reuse. Always wash hands after handling the product.
7.2. Conditions for safe storage, including	any incompatibilities
Technical measures	 Proper grounding procedures to avoid static electricity should be followed. Ground/bond container and receiving equipment.
Storage conditions	 Keep in fireproof place. Keep container tightly closed. Store in a well-ventilated place. Keep cool. Store locked up.
Incompatible materials	: Heat sources.
Packaging materials	: Store always product in container of same material as original container.
7.3. Specific end use(s)	

No additional information available

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

8.1.1 National occupational exposure and biological limit values

No additional information available

8.1.2. Recommended monitoring procedures

No additional information available

8.1.3. Air contaminants formed

No additional information available

8.1.4. DNEL and PNEC

No additional information available

8.1.5. Control banding

No additional information available

8.2. Exposure controls

8.2.1. Appropriate engineering controls

Appropriate engineering controls: Ensure good ventilation of the work station.

8.2.2. Personal protection equipment

Personal protective equipment:

Wear recommended personal protective equipment.

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Personal protective equipment symbol(s):



8.2.2.1. Eye and face protection

Eye protection: Chemical goggles or safety glasses

8.2.2.2. Skin protection

Skin and body protection: Wear a mask

Hand protection: Protective gloves

8.2.2.3. Respiratory protection

Respiratory protection: Wear appropriate mask

8.2.2.4. Thermal hazards

No additional information available

8.2.3. Environmental exposure controls

Environmental exposure controls:

Avoid release to the environment.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	: Liquid
Colour	: Colourless.
Appearance	: Clear liquid.
Molecular mass	114.23 g/mol
Odour	: petroleum-like odour.
Odour threshold	Not available
Melting point	: Not applicable
Freezing point	: -107 °C
Boiling point	: 98 – 99 °C
Flammability	: Flammable
	Highly flammable liquid and vapour.
Lower explosion limit	: 1.1 vol %
Upper explosion limit	: 6 vol %
Flash point	: -12 °C
Auto-ignition temperature	: 418 °C
Decomposition temperature	: Not available
рН	: Not available
Viscosity, kinematic	: 0.737 mm²/s
Viscosity, dynamic	: 0.51 mPa⋅s at 22 °C
Solubility	: Water: Immiscible
Partition coefficient n-octanol/water (Log Kow)	: Not available
Partition coefficient n-octanol/water (Log Pow)	: 4.6
Vapour pressure	: 5.1 kPa at 20°C
Vapour pressure at 50°C	: Not available
Density	: 0.692 g/cm³ at 20°C
Relative density	: 0.69
Relative vapour density at 20°C	: 3.93 (Air = 1)
Particle characteristics	: Not applicable

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9.2. Other information

No additional information available

9.2.2. Other safety characteristics

Refractive index

: 1.39 - 1.392 (20 °C, 589 nm)

SECTION 10: Stability and reactivity

10.1. Reactivity

Highly flammable liquid and vapour.

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use.

10.4. Conditions to avoid

Open flame. Heat. Sparks. Avoid contact with hot surfaces. No flames, no sparks. Eliminate all sources of ignition.

10.5. Incompatible materials

No additional information available

10.6. Hazardous decomposition products

May release flammable gases.

SECTION 11: Toxicological information

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

Acute toxicity (oral)	: Not classified
Acute toxicity (dermal)	: Not classified
Acute toxicity (inhalation)	: Not classified
Skin corrosion/irritation	: Causes skin irritation.
Serious eye damage/irritation	: Not classified
Respiratory or skin sensitisation	: Not classified
Germ cell mutagenicity	: Not classified
Carcinogenicity	: Not classified
Reproductive toxicity	: Not classified
STOT-single exposure	: May cause drowsiness or dizziness.
STOT-repeated exposure	: Not classified
Aspiration hazard	: May be fatal if swallowed and enters airways.
2,2,4-TRIMETHYLPENTANE AR/ACS (540-84-1)	

Viscosity, kinematic

0.737 mm²/s

11.2. Information on other hazards

No additional information available

SECTION 12: Ecological information	
12.1. Toxicity	
Ecology - general	: Very toxic to aquatic life with long lasting effects.

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Hazardous to the aquatic environment, short-term :	Very toxic to aquatic life with long lasting effects. Very toxic to aquatic life.
(acute) Hazardous to the aquatic environment, long-term : (chronic)	Very toxic to aquatic life with long lasting effects.
12.2. Persistence and degradability	
2,2,4-TRIMETHYLPENTANE AR/ACS (540-84-	1)
Persistence and degradability	Rapidly degradable
12.3. Bioaccumulative potential	
No additional information available	
12.4. Mobility in soil	
No additional information available	
12.5. Results of PBT and vPvB assessment	
No additional information available	
12.6. Endocrine disrupting properties	
No additional information available	
12.7. Other adverse effects	
No additional information available	
SECTION 13: Disposal considerations	

13.1. Waste treatment methods	
Regional waste regulation	: Disposal must be done according to official regulations.
Waste treatment methods	: Dispose of contents/container in accordance with licensed collector's sorting instructions.
Sewage disposal recommendations	: Disposal must be done according to official regulations.
Product/Packaging disposal recommendations	: Dispose of contents/container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation. Disposal must be done according to official regulations.
Additional information	: Handle empty containers with care because residual vapours are flammable. Flammable vapours may accumulate in the container. Do not re-use empty containers.
Ecological information	: Hazardous waste due to toxicity.

SECTION 14: Transport information

In accordance with ADR / IMDG / IATA / ADN / RID

14.1. UN number or ID number		
UN-No. (ADR) UN-No. (IMDG) UN-No. (IATA) UN-No. (ADN) UN-No. (RID)	: UN 1262 : UN 1262 : UN 1262 : UN 1262 : UN 1262	
14.2. UN proper shipping name		
Proper Shipping Name (ADR) Proper Shipping Name (IMDG) Proper Shipping Name (IATA) Proper Shipping Name (ADN) Proper Shipping Name (RID)	: OCTANES : OCTANES : Octanes : OCTANES : OCTANES	

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Transport document description (ADR)	: UN 1262 OCTANES, 3, II, (D/E)
Transport document description (IMDG)	: UN 1262 OCTANES, 3, II, MARINE POLLUTANT/ENVIRONMENTALLY HAZARDOUS
Transport document description (IATA)	: UN 1262 Octanes, 3, II, ENVIRONMENTALLY HAZARDOUS
Transport document description (ADN)	: UN 1262 OCTANES, 3, II, ENVIRONMENTALLY HAZARDOUS
Transport document description (RID)	: UN 1262 OCTANES, 3, II, ENVIRONMENTALLY HAZARDOUS

14.3. Transport hazard class(es)

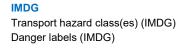
ADR

Transport hazard class(es) (ADR) Danger labels (ADR)



: 3 : 3

:





IATA Transport hazard class(es) (IATA) Danger labels (IATA)



ADN

Transport hazard class(es) (ADN) Danger labels (ADN)

RID

Transport hazard class(es) (RID) Danger labels (RID)





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14.4. Packing group	
Packing group (ADR) Packing group (IMDG) Packing group (IATA) Packing group (ADN) Packing group (RID)	: H : H : H : H
14.5. Environmental hazards	
Dangerous for the environment Marine pollutant Other information	:Yes :Yes :No supplementary information available

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14.6. Special precautions for user	
Overland transport	
Classification code (ADR)	: F1
Limited quantities (ADR)	: 11
Excepted quantities (ADR)	: E2
Packing instructions (ADR)	: P001, IBC02, R001
Mixed packing provisions (ADR)	: MP19
Portable tank and bulk container instructions (ADR)	: T4
Portable tank and bulk container special provisions	: TP1
(ADR)	
Tank code (ADR)	: LGBF
Vehicle for tank carriage	: FL
Transport category (ADR)	: 2
Special provisions for carriage - Operation (ADR)	: S2, S20
Hazard identification number (Kemler No.)	: 33
Orange plates	
	33
	1262
Tunnel restriction code (ADR)	: D/E
EAC code	: 3YE
Transport by sea	
Limited quantities (IMDG)	: 1L
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
EmS-No. (Spillage)	: S-E
Stowage category (IMDG)	: 3-L : B
Properties and observations (IMDG)	: Colourless liquids. Explosive limits: 1% to 6.5%. ISOOCTANE: flashpoint-12°C c.c. n-
	OCTANE: flashpoint 13°C c.c. Immiscible with water.
MFAG-No	: 128
Air transmost	
Air transport	: E2
PCA Excepted quantities (IATA)	
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
Inland waterway transport	
Classification code (ADN)	: F1
Limited quantities (ADN)	: 1L
Excepted quantities (ADN)	: E2
Carriage permitted (ADN)	: Т
Equipment required (ADN)	: PP, EX, A
Ventilation (ADN)	: VE01
Number of blue cones/lights (ADN)	: 1
Dell fremen ent	
Rail transport	
Classification code (RID)	: F1
Limited quantities (RID)	: 1L
Excepted quantities (RID)	: E2
Packing instructions (RID)	: P001, IBC02, R001
Mixed packing provisions (RID)	: MP19

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Portable tank and bulk container instructions (RID) Portable tank and bulk container special provisions (RID)		T4 TP1
Tank codes for RID tanks (RID)	:	LGBF
Transport category (RID)	:	2
Colis express (express parcels) (RID)	:	CE7
Hazard identification number (RID)	:	33

14.7. Maritime transport in bulk according to IMO instruments

Not applicable

SECTION 15: Regulatory information

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

15.1.1. EU-Regulations

REACH Annex XVII (Restriction List)

EU restriction list (REACH Annex XVII)	
Reference code	Applicable on
3(a)	2,2,4-TRIMETHYLPENTANE AR/ACS
3(b)	2,2,4-TRIMETHYLPENTANE AR/ACS
3(c)	2,2,4-TRIMETHYLPENTANE AR/ACS
40.	2,2,4-TRIMETHYLPENTANE AR/ACS

REACH Annex XIV (Authorisation List)

Not listed on REACH Annex XIV (Authorisation List)

REACH Candidate List (SVHC)

Not listed on the REACH Candidate List

PIC Regulation (Prior Informed Consent)

Not listed on the PIC list (Regulation EU 649/2012)

POP Regulation (Persistent Organic Pollutants)

Not listed on the POP list (Regulation EU 2019/1021)

Ozone Regulation (1005/2009)

Not listed on the Ozone Depletion list (Regulation EU 1005/2009)

Dual-Use Regulation (428/2009)

Contains no substance subject to the COUNCIL REGULATION (EC) No 428/2009 of 5 May 2009 setting up a Community regime for the control of exports, transfer, brokering and transit of dual-use items.

Explosives Precursors Regulation (2019/1148)

Contains no substance(s) listed on the Explosives Precursors list (Regulation EU 2019/1148 on the marketing and use of explosives precursors)

Drug Precursors Regulation (273/2004)

Contains no substance(s) listed on the Drug Precursors list (Regulation EC 273/2004 on the manufacture and the placing on market of certain substances used in the illicit manufacture of narcotic drugs and psychotropic substances)

15.1.2. National regulations

France

Occupational diseases

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Code	Description
RG 84	Conditions caused by liquid organic solvents for professional use: saturated or unsaturated aliphatic or cyclic liquid hydrocarbons and mixtures thereof; liquid halogenated hydrocarbons; nitrated derivatives of aliphatic hydrocarbons; alcohols; glycols, glycol ethers; ketones; aldehydes; aliphatic and cyclic ethers, including tetrahydrofuran; esters; dimethylformamide and dimethylacetamine; acetonitrile and propionitrile; pyridine; dimethylsulfone and dimethylsulfoxide

Germany

Water hazard class (WGK) Hazardous Incident Ordinance (12. BImSchV)	 : WGK 2, Significantly hazardous to water (Classification according to AwSV; ID No. 479). : Is not subject to the Hazardous Incident Ordinance (12. BImSchV)
Netherlands	
SZW-lijst van kankerverwekkende stoffen	: The substance is not listed
SZW-lijst van mutagene stoffen	: The substance is not listed
SZW-lijst van reprotoxische stoffen – Borstvoeding	: The substance is not listed
SZW-lijst van reprotoxische stoffen –	: The substance is not listed
Vruchtbaarheid	
SZW-lijst van reprotoxische stoffen – Ontwikkeling	: The substance is not listed
Denmark	
Classification remarks	: Emergency management guidelines for the storage of flammable liquids must be followed
Danish National Regulations	: Young people below the age of 18 years are not allowed to use the product

15.2. Chemical safety assessment

No chemical safety assessment has been carried out

SECTION 16: Other information

Abbreviations and acronyms:		
ADN	European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways	
ADR	European Agreement concerning the International Carriage of Dangerous Goods by Road	
ATE	Acute Toxicity Estimate	
BCF	Bioconcentration factor	
BLV	Biological limit value	
BOD	Biochemical oxygen demand (BOD)	
COD	Chemical oxygen demand (COD)	
DMEL	Derived Minimal Effect level	
DNEL	Derived-No Effect Level	
EC-No.	European Community number	
EC50	Median effective concentration	
EN	European Standard	
IARC	International Agency for Research on Cancer	
ΙΑΤΑ	International Air Transport Association	
IMDG	International Maritime Dangerous Goods	
LC50	Median lethal concentration	
LD50	Median lethal dose	
LOAEL	Lowest Observed Adverse Effect Level	
NOAEC	No-Observed Adverse Effect Concentration	
NOAEL	No-Observed Adverse Effect Level	

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Abbreviations and acronyms:	
NOEC	No-Observed Effect Concentration
OECD	Organisation for Economic Co-operation and Development
OEL	Occupational Exposure Limit
РВТ	Persistent Bioaccumulative Toxic
PNEC	Predicted No-Effect Concentration
RID	Regulations concerning the International Carriage of Dangerous Goods by Rail
SDS	Safety Data Sheet
STP	Sewage treatment plant
ThOD	Theoretical oxygen demand (ThOD)
TLM	Median Tolerance Limit
VOC	Volatile Organic Compounds
CAS-No.	Chemical Abstract Service number
N.O.S.	Not Otherwise Specified
vPvB	Very Persistent and Very Bioaccumulative
ED	Endocrine disrupting properties

Full text of H- and EUH-statements:	
Aquatic Acute 1	Hazardous to the aquatic environment – Acute Hazard, Category 1
Aquatic Chronic 1	Hazardous to the aquatic environment – Chronic Hazard, Category 1
Asp. Tox. 1	Aspiration hazard, Category 1
Flam. Liq. 2	Flammable liquids, Category 2
H225	Highly flammable liquid and vapour.
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.
Skin Irrit. 2	Skin corrosion/irritation, Category 2
STOT SE 3	Specific target organ toxicity – Single exposure, Category 3, Narcosis

Safety Data Sheet (SDS), EU

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.