



Section 1. Identification of the substance/ mixture and of the company/ undertaking

1.1 Product identifier

Product name: IC3D Standard ABS

This safety data sheet pertains to the following colors:

Blue, Green, Grey, Natural, Orange, Red, White, Yellow

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

Relevant identified uses: Mixture used to produce molded plastic articles

1.3 Details of the supplier of the Safety Data Sheet

IC3D, Inc
1697 Westbelt Drive
Columbus, OH 43228
614-344-0414

Section 2. Hazards identification

2.1 Classification of the substance or mixture

Classification according to Directive 67/548/EEC or 1999/45/EC: Not classified as hazardous (polymeric state)

Classification according to Regulation (EC) N° 1272/2008 (CLP): Not classified as hazardous (polymeric state)

2.2 Label elements

Not labeled as hazardous

2.3 Other hazards

vPvB/PBT assessment: not available

Section 3. Composition/information on ingredients

3.1 Composition of the substance/ preparation



Substance or Preparation: Substance Content

CAS	Name	Content
9003-56-9	Acrylonitrile-Butadiene-Styrene copolymer	> 98 %
-	Additives	≤ 2 %

Impurities Contributing to Hazard: None

3.2 Additional information:

Reach Info:

	Registration No.
Acrylonitrile	01-2119474195-34-0045
Styrene	01-2119457861-32-0006
	01-2119457861-32-0007
	01-2119457861-32-0057
	01-2119457861-32-0065
	01-2119457861-32-0081
Buta-1,3-diene	01-2119471988-16-0044

3.3 For full text of R- and H-phrases: See section 16

Section 4. First-aid measures

4.1 Description of first aid measures

General notes: Remove affected persons from the danger area, at the same time ensuring your own safety. Remove all contaminated clothing immediately.

Following inhalation: In case of gases evolving from melted resin, move subject to fresh air. Treat symptomatically.

Following skin contact: In case of pellets or powder, wash with water. In case of smelt, wash affected skin area and clothing with plenty of (soap and) water. Seek medical advice.

Following eye contact: In case of pellets or powder, flush with plenty of water for at least 15 minutes. Seek medical advice if any dust particles remain.

In case of gases evolving from melted resin of high temperature, flush with plenty of water for at least 15 minutes. Seek medical advice if necessary.



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Following ingestion: Induce vomiting. Rinse mouth with water. Seek medical advice if necessary

4.2 Most important symptoms & effects both acute & delayed

Dust: Skin irritation, eye irritations and redness

4.3 Indication of any immediate medical attention and special treatment needed:

Treat symptomatically.
(Decontamination, vital functions)

Section 5. Fire-fighting measures

5.1 Extinguishing media

Suitable extinguishing agents: Water, foam, dry chemical powder

5.2 Special hazards arising from the substance or mixture:

5.3 Advice for firefighters

Protective equipment: Self-contained breathing apparatus

Section 6. Accidental release measures

6.1 Personal precautions, protective equipment & emergency procedures

Pellets or powder remained on ground may cause slipping
Wear protective equipment
Ensure adequate ventilation
Keep away from ignition sources
Keep unprotected persons away

6.2 Environmental precautions

Gather pellets and powder thoroughly to avoid birds or fishes taking from draining water.
Do not allow product to reach sewage system or water bodies. Inform respective authorities in case product reaches water, sewage system or soil.

6.3 Methods and material for containment and cleaning up



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Recovery if not contaminated or disposal.

6.4 Reference to other sections

See Section 7 for information on safe handling. See Section 8 for information on personal protection equipment.

Section 7. Handling and storage

7.1 Precautions for safe handling

Measures to prevent fire: Prevent from fire around handling area

Measures to prevent aerosol and dust generation: maintain good housekeeping standards to prevent accumulation of dust. To avoid dust explosion resulting from the existence of powder, electrostatics eliminators and grounding should be fixed to such equipment as air transferring pipes, bag filters and hoppers. Use electrically conductive filters for bag filters.

7.2 Conditions for safe storage, including any incompatibilities

Technical measures and storage conditions: Keep the material at a cool dry place. Protect from direct sunlight, rain, and violent temperature fluctuation. Fire is inhibited around storage area.

Section 8. Exposure controls/personal protection

8.1 Control parameters

Exposure Limits: None established

8.2 Exposure control

Appropriate engineering controls: Install eyes washer and shower in the place of operation. Provide local exhaust ventilation system. Ensure compliance with applicable exposure limits

Personal protection:

- Respiratory protection: Wear masks for cleaning molding machines
- Hand protection: Heat-insulating gloves when handling molten form
- Eye protection: Wear safety glasses for general purpose. Wear chemical goggles for cleaning molding machines
- Skin and body protection: Gloves necessary for handling melted resin
- Hygiene measures: Wash hands after handling

8.3 Environmental exposure controls

Product related measures to prevent exposure: None specific

Instruction measures to prevent exposure: None specific

Organizational measures to prevent exposure: None specific

Technical measures to prevent exposure: None specific



Environmental exposure controls: Do not allow product to reach sewage system or water bodies

Section 9. Physical and chemical properties

9.1 Information on basic physical and chemical properties

Appearance	Physical state: solid, granulate
Odor	Odorless or negligible
Color	Natural or off-white
Odor threshold	No data available
pH	Not applicable
Melting point / freezing point	Not applicable
Initial boiling point and boiling range	Not applicable
Flash point	>400 °C
Evaporation rate	Not applicable
Flammability (solid, gas)	Not applicable
Upper/lower flammability or explosive limits	Not applicable
Vapor pressure	Not applicable
Vapor density	Not applicable
Relative density (H ₂ O=1)	1.03 - 1.10 g/cm ³
Bulk density	Not available
Solubility(ies)	Not soluble
Partition coefficient (n-octanol/water)	Not available
Auto-ignition temperature	>400 °C
Decomposition temperature	> 280 °C
Viscosity	Not applicable
Explosive properties	Not applicable
Oxidizing properties	Not explosive

Section 10. Stability and reactivity



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10.1 Reactivity: Non-reactive under normal handling and storage conditions

10.2 Chemical stability: Stable under normal handling and storage conditions

10.3 Conditions to avoid: Avoid excessive heat, flames, and all sources of ignition

10.4 Incompatible materials: Not applicable

10.5 Hazardous decomposition products: Not applicable

Section 11. Toxicological information

11.1 Information on toxicological effects

Toxicological effects:

- Acute toxicity (oral): Lack of data.
- Acute toxicity (dermal): Lack of data.
- Acute toxicity (inhalative): Lack of data.
- Skin corrosion/irritation: Lack of data. May cause irritations.
- Eye damage/irritation: Lack of data. May cause irritations.
- Sensitization to the respiratory tract: Lack of data. Not to be expected
- Skin sensitization: Lack of data. Not to be expected
- Germ cell mutagenicity/Genotoxicity: Lack of data. Not to be expected
- Carcinogenicity: Lack of data. See Section 15.1 for additional information.
- Reproductive toxicity: Lack of data. Not to be expected
- Effects on or via lactation: Lack of data.
- Specific target organ toxicity (single exposure): Lack of data.
- Dusts: Irritating to eyes, respiratory system, and skin.
- Specific target organ toxicity (repeated exposure): Lack of data.

Symptoms

- Dust: Can cause skin, eye, and respiratory tract irritation.
- The melted product can cause severe burns.
- Thermal treatment, Processing:
- Irritating to eyes, respiratory system, and skin.
- In case of ingestion: Swallowing may cause gastrointestinal irritation and pain of guts.

Section 12. Ecological information



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12.1 Toxicity

Not expected to be acutely toxic, but material in pellet or bead form may mechanically cause adverse effects if ingested by waterfowl or aquatic life.

12.2 Persistence and degradability

Further details:

- Biodegradation: Product is not readily biodegradable.
- The product is likely to persist in the environment.

Effects in sewage plants:

- In sewage treatment plants it may be separated mechanically.

12.3 Bio accumulative potential

To avoid bioaccumulation plastics should not be disposed in the sea or in other water environments.

12.4 Mobility in soil

No data available

12.5 Results PBT & vPvB assessment

According to the revised Annex XIII of regulation (EC) 1907/2006 and (EC) 253/2011: No information available on the product as such.

12.6 Other adverse effects:

General information: Do not allow to entrance into groundwater, surface water, or drains.

Section 13. Disposal considerations

13.1 Waste treatment methods

Product / Packaging disposal: Dispose in accordance with the current local regulations.

Waste treatment-relevant information: Inadequate incineration may generate toxic gases such as CO, HCN, AN and SM

Action 14. Transport information

ADR/RID

14.1 UN number



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Not applicable

14.2 UN proper shipping name

Proper Shipping Name: NOT REGULATED

14.3 Transport hazard class(es) Not applicable

14.4 Packing Group

Not applicable

14.5 Environmental hazards

Not considered environmentally hazardous based on available data

14.6 Special precautions for user

Special Provisions: no data available

Hazard identification No: no data available

ADNR / ADN

14.1 UN number

Not applicable

14.2 UN proper shipping name

Proper Shipping Name: NOT REGULATED

14.3 Transport hazard class(es)

Not applicable

14.4 Packing Group

Not applicable

14.5 Environmental hazards

Not considered environmentally hazardous based on available data

14.6 Special precautions for user

No data available

IMDG

14.1 UN number

Not applicable

14.2 UN proper shipping name

Proper Shipping Name: NOT REGULATED

14.3 Transport hazard class(es)

Not applicable

14.4 Packing Group

Not applicable

14.5 Environmental hazards

Not considered environmentally hazardous based on available data

14.6 Special precautions for user

EMS Number: Not applicable

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

Not applicable

ICAO/IATA

14.1 UN number

Not applicable



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14.2 UN proper shipping name

Proper Shipping Name: NOT REGULATED

14.3 Transport hazard class(es)

Not applicable

14.4 Packing Group

Not applicable

14.5 Environmental hazards

Not considered environmentally hazardous based on available data

14.6 Special precautions for user

No data available

Section 15. Regulatory information

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

Authorization and / or restrictions on use: None

CA regulations: The following warning is given pursuant to Prop 65:



WARNING: ABS filaments when used for 3D Printing can expose you and others nearby to Styrene, a chemical known to the State of California to cause cancer. www.P65Warnings.ca.gov.

ALWAYS USE THIS PRODUCT IN A WELL-VENTILATED AREA.

15.2 Chemical Safety Assessment

For this substance, a chemical safety assessment is not yet required.

Section 16. Other information

16.1 Indication of changes

Version 1: First issue according to Regulations (EC) 1907/2006 (REACH) & 1272/2008 (CLP)

16.2 Abbreviations and acronyms

AGS	Ausschuss für Gefahrstoffe	LoW	List of Waste
AF	Assessment Factor	MARPOL	Marine Pollution
BCF	Bioconcentration Factor	MIE	Minimum Ignition Energy
CAS	Chemical Abstract Service	N°EC	European Commission number



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CMR	Carcinogenic, Mutagenic and Reprotoxic	NFPA	National Fire Protection Association
CSR	Chemical Safety Report	NIOSH	National Institute of Occupational Safety and Health
DFG	German Research Foundation	NOEC	No Observed Effect Concentration
DNEL	Derived No Effect Level	NOELR	No Observed Effect Loading Rate
EC	European Commission	OECD	Organization for Economic Co-operation and Development
EC50	Effective Concentration (required to induce a 50% effect)	OEL	Occupational Exposure Limit
EEC	European Economic Community	OSHA	Occupational Safety and Health Administration
EWC	European Waste Catalogue Code	PBT	Persistent Bio accumulable Tonique
IDLH	Immediately Dangerous to Life or Health	PNEC	Revisable Non-Effect Concentration
IBC	International Bulk Chemical	QSAR	Quantitative Structure-Activity Relationship
Koc	Soil/Water Partition Coefficient	STOT	Specific Target Organ Toxicity
Kow	Octanol/Water Partition Coefficient	TCLo	Toxic Concentration Low
LC50	Lethal Concentration 50	TDLo	Toxic Dose Low
LD50	Lethal Dose 50	UN	United Nations
LEL	Lower Explosive Limit	UVCB	Unknown or Variable Composition Complex Reaction Products, or Biological Materials
LL100	Lethal Loading	vPvB	very Persistent, very Bio accumulative



LOEC	Lowest Observed Effect Concentration		
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16.3 Key literature references and sources for data

<http://esis.jrc.ec.europa.eu/>
<http://echa.europa.eu/>
<http://gestis-en.itrust.de>

16.4 Relevant R-phrases and/or H-statements (number and full text):

H220	Extremely flammable gas	R10	Flammable
H225	Highly flammable liquid and vapor	R11	Highly flammable
H226	Flammable liquid and vapor	R12	Extremely flammable
H301	Toxic if swallowed	R20	Harmful by inhalation
H311	Toxic in contact with skin	R23/24/25	Toxic by inhalation, in contact with skin and if swallowed
H315	Causes skin irritation		
H317	May cause an allergic skin reaction	R36	Irritating to eyes
H318	Causes serious eye damage	R37	Irritating to respiratory system
H319	Causes serious eye irritation	R38	Irritating to skin
H331	Toxic if inhaled	R40	Limited evidence of a carcinogenic effect
H332	Harmful if inhaled	R41	Risk of serious damage to eyes
H335	May cause respiratory irritation	R43	May cause sensitization by skin contact
H340	May cause genetic defects	R45	May cause cancer
H350	May cause cancer	R46	May cause inheritable genetic damage
H351	Suspected of causing cancer	R50/53	Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment
H400	Very toxic to aquatic life	R51/53	Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment
H411	Toxic to aquatic life with long lasting effects		



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16.6 Further information: According to the guidance version 2.0 for monomers and polymers from the European Chemicals Agency dated as of April 2012, the classification of the polymer considers the classification of all its constituents, such as unreacted monomers. These constituents in fact should be considered for classification of the polymer. This means that the same classification methods as for mixture should be applied to polymer substances. To determine a classification for the studies about the water-soluble fraction as well as the absorption should be performed on the polymer as such.

Disclaimer: This data sheet is based on information from source material supplier(s) and other parties and is, to the best of IC3D's knowledge, accurate and reliable as of the date compiled. However, IC3D makes no representation or guarantee as to the accuracy, reliability, or completeness of the information. NO WARRANTY OF MERCHANTABILITY, FITNESS FOR ANY PARTICULAR PURPOSE, OR ANY OTHER WARRANTY, EXPRESS OR IMPLIED, IS MADE CONCERNING THE INFORMATION. This information relates to the specific material designated and may not be valid if the material is used in combination with any other materials or in any particular process. It is the user's responsibility to determine the suitability of the material for a particular use. IC3D does not accept liability for any loss or damage that may result from the use of this information.